PUBLIC UTILITY DISTRICT NO. 1 *of* CHELAN COUNTY
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April 10, 2013

VIA ELECTRONIC FILING

Honorable Kimberly D. Bose, Secretary, and
Nathaniel J. Davis, Sr., Deputy Secretary
FEDERAL ENERGY REGULATORY COMMISSION
888 First Street, NE
Washington, DC 20426

Re: **Lake Chelan Hydroelectric Project No. 637**
Article 406 – Wildlife Habitat Plan
Five-Year Wildlife Habitat Plan and Summary Report

Dear Secretary Bose and Deputy Secretary Davis:

On April 10, 2008, the Federal Energy Regulatory Commission (Commission) issued the "*Order Modifying and Approving Wildlife Habitat Plan under Article 406*"[1] requiring the Public Utility District No. 1 of Chelan County, Washington (Chelan PUD) to file every five years an updated Wildlife Habitat Plan for projected upland and riparian habitat improvements for the next five years in the Lake Chelan basin. Additionally, Chelan PUD is required to file every five years a summary of the improvements implemented and the funding provided during the previous five years, including the results of the wildlife surveys.

In accordance with the above Order, Chelan PUD hereby files the Wildlife Habitat Plan 2013-2017 and the Wildlife Habitat Summary Report 2008-2012 for Commission approval. Please note that the five-year summary report includes the annual activity/work plan and wildlife survey information for 2012.[2]

Please do not hesitate to contact me or Von Pope at (509) 661-4625 regarding any questions or comments regarding this report.

Sincerely,

Michelle Smith
Licensing and Compliance Manager
michelle.smith@chelanpud.org
(509)661-4180

Attachments: Wildlife Habitat Plan 2013-2017 and Wildlife Habitat Summary Report 2008-2012

c: Annelise Lesmeister, NPS
Paul Willard, USFS
Graham Simon, WDFW

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[1] 123 FERC ¶ 62,039 (2008)
[2] Per electronic mail with Hillary Berlin, Commission staff, on August 9, 2012.

WILDLIFE HABITAT PLAN
2013-2017

LICENSE ARTICLE 406

Final

LAKE CHELAN HYDROELECTRIC PROJECT
FERC Project No. 637

April 2013

Public Utility District No. 1 of Chelan County
Wenatchee, Washington

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

EXECUTIVE SUMMARY

The Federal Energy Regulatory Commission (FERC) Order on Offer of Settlement and Issuing New License (License) and Order on Rehearing for the Lake Chelan Hydroelectric Project No. 637 (Project) were issued November 6, 2006, and April 19, 2007, respectively, to the Public Utility District No. 1 of Chelan County (Chelan PUD). Article 406 of the new Project License required Chelan PUD to submit to FERC a Wildlife Habitat Plan (WHP) by November 6, 2007. On April 10, 2008, the FERC issued its order modifying and approving the initial WHP. In accordance with the order, Chelan PUD is required to update and file the WHP for FERC's approval every five years.

This next five-year WHP for period of 2013 to 2017 includes some projects that were not completed or not initiated under the initial WHP, as well as new projects. Specifically, this plan includes provisions for acquiring conservation easements and providing habitat enhancement on private lands on the north shore of Lake Chelan, upland habitat improvements for the USDA Forest Service and Washington Department of Fish and Wildlife (WDFW), noxious weed control, wildlife surveys, and riparian habitat improvements on USDA Forest Service and lands surrounding Lake Chelan.

SECTION 1: INTRODUCTION

The Federal Energy Regulatory Commission (FERC) Order on Offer of Settlement and Issuing New License (License) and Order on Rehearing for the Lake Chelan Hydroelectric Project No. 637 (Project) were issued November 6, 2006, and April 19, 2007, respectively, to the Public Utility District No. 1 of Chelan County (Chelan PUD). Article 406 of the new Project License required Chelan PUD to submit to FERC a Wildlife Habitat Plan (WHP) by November 6, 2007. On April 10, 2008, the FERC issued its order modifying and approving the initial WHP. In accordance with the order, Chelan PUD is required to update and file the WHP for FERC's approval every five years.

Similar to the initial WHP, this 2013-2017 WHP includes: (1) a detailed description of the habitat improvement measures, including the methods to be used, (2) a detailed description of the location where the improvements will occur, including maps, and (3) some contingency measures to allow flexibility around an ever changing landscape. Figure 1 shows the WHP project area and the overall location for some of the projects.

Implementation of the 2013-2017 WHP, as specified in Article 406 and Settlement Agreement[1] Article 9 of Appendix A of the License, entails Chelan PUD continuing to provide funds for: 1) upland habitat improvements consisting of conservation easement acquisition, upland habitat improvements, and 2) riparian habitat improvements. Additionally, Chelan PUD will conduct wildlife surveys in the Lake Chelan basin and maintain three upland game bird feeders.

None of the upland or riparian habitat improvement measures require annual or periodic maintenance to ensure their success. Therefore, no additional lands need be brought into the Project boundary. Sections 2 and 3 of this WHP address habitat improvement measures and methods, the location where the improvements will occur, and an implementation schedule. However, the level of detail available at this time is somewhat limited due to, among other things, the dynamic nature of the Chelan basin environment (e.g., uncertainty regarding the location and extent of future wildfires) and the adaptive management practices to be used in implementing the measures contained in the plan. Further detail will become available as implementation progresses and will be summarized in required annual progress reports to the the FERC.

The 2013-2017 WHP was developed in consultation with the Lake Chelan Wildlife Forum (LCWF), which includes the National Park Service (NPS), USDA Forest Service, U.S. Fish and Wildlife Service (USFWS), Washington Department of Fish and Wildlife (WDFW), Confederated Tribes of the Colville Reservation, Yakama Nation, Wenatchee Sportsman's Association, Lake Chelan Sportsman's Association, NCW Mule Deer Foundation, Foundation for North American Wild Sheep, Audubon Society, and National Wild Turkey Federation. Documentation of the consultation that occurred during development of this plan is attached as Appendix A.

[1] Chelan PUD, on behalf of the signatories, filed a Comprehensive Settlement Agreement on October 17, 2003. The settlement agreement includes articles that were included in the License as Appendix A.

Revisions include a rewrite of the initial WHP to: 1) provide the FERC with proposed actions, schedules, and methods; 2) provide the FERC with as much detail as possible regarding future plans for implementing license measures for Lake Chelan wildlife; and 3) to preserve the background and intent of the Settlement Agreement in order to guide the LCWF during the later years of License implementation. Upon approval, this 2013-2017 WHP will supersede the initial WHP for the period of 2008-2012.

Funds allocated under the WHP will be expended on resources that are most valuable to wildlife and most compatible with wildlife land use in Chelan County. Those lands will include key habitat types, migration corridors, and shrub steppe, grassland, and riparian/wetland habitats that offer restoration or improvement opportunities. The primary goal of the WHP is to enhance wildlife habitat within portions of Chelan County bordering Lake Chelan to:

i) Restore, maintain, or improve ecological quality and diversity;
ii) Restore, maintain, or increase habitat for key indicator wildlife species; and
iii) Provide for public use compatible with the ecological quality, diversity, and carrying capacity for key wildlife species goals.

Primary wildlife indicator species for purposes of the WHP include: 1) mule deer and bighorn sheep; 2) threatened, endangered, sensitive, species of concern, or survey and management species; and 3) riparian and wetland indicator bird and amphibian species.

The WHP focuses primarily on big game species because the LCWF places a high value on protecting and enhancing habitat for species that overwinter in the Chelan Basin, which are mule deer, bighorn sheep, and mountain goats (Eldred, pers. com.). However, it was important to the LCWF that the same measures implemented for the benefit of big game also benefit a broad community of terrestrial wildlife, including avian species. Most of acreage surrounding Lake Chelan is shrub-steppe and riparian habitat; hence, the plan emphasizes enhancement projects for these types of habitats.

SECTION 2: UPLAND HABITAT IMPROVEMENTS& MONITORING

Implementation of upland habitat improvements, as specified in License Article 406 and Settlement Agreement Article 9 of Appendix A of the License, requires Chelan PUD to provide funds for conservation easement acquisition and habitat improvements. Additionally, Chelan PUD will conduct wildlife surveys in the Lake Chelan basin and maintain three upland game feeders.

None of the upland habitat improvement measures described in this section requires annual or periodic maintenance to ensure their success; therefore, no upland habitat lands need be brought into the Project boundary.

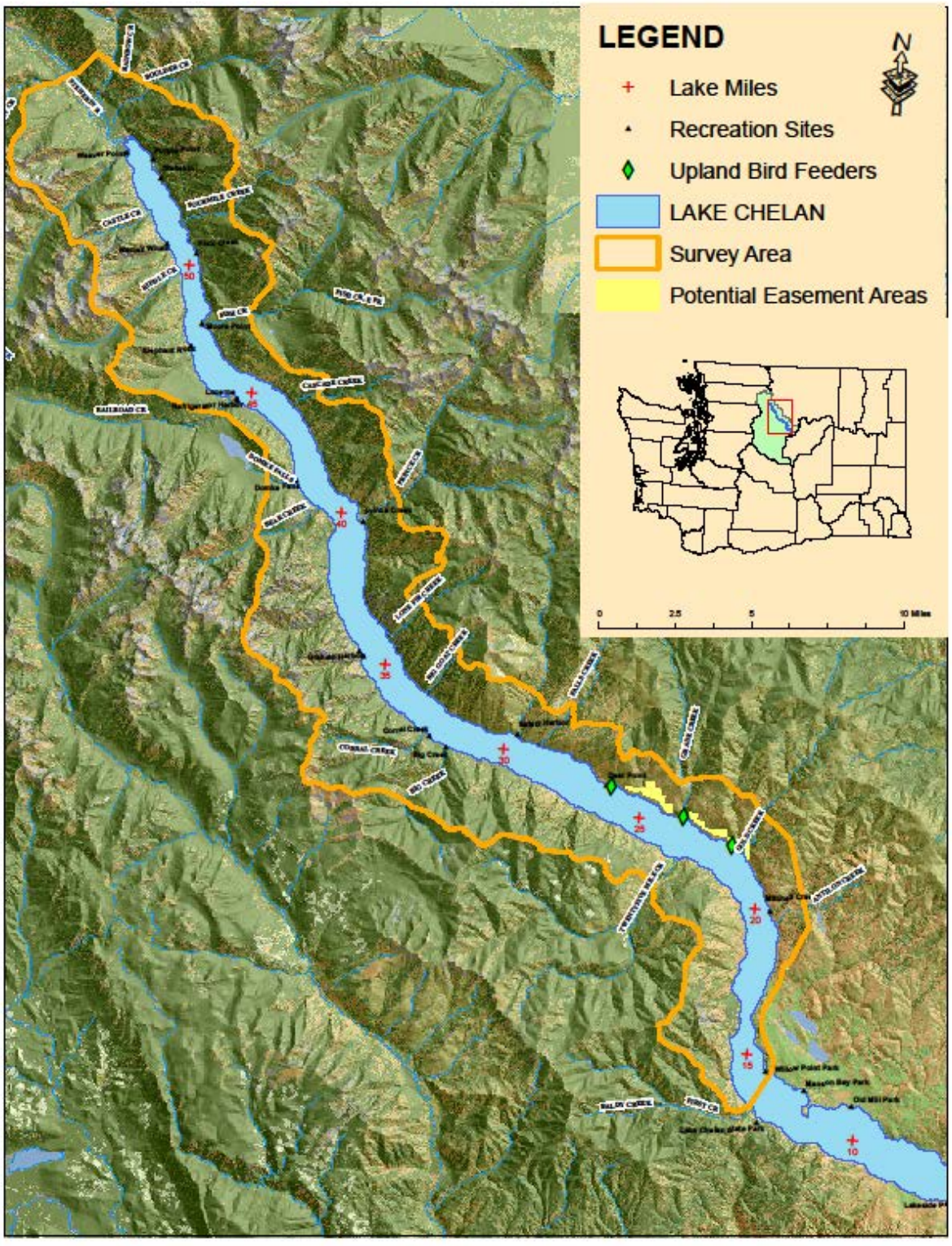

Figure 1. Lake Chelan Wildlife Habitat Plan Vicinity Map, 2012.

2.1 Conservation Easement Acquisition

Settlement Agreement Article 9(a) of Appendix A of the Project License describes making funds available for acquiring conservation easements on private lands on the north shore of Lake Chelan.

> (1) **Easement Acquisition** (LC09al). (1) Chelan PUD shall make available $220,000 to the Chelan-Douglas Land Trust, for the acquisition of conservation easements in perpetuity on privately-owned lands located on the north shore of Lake Chelan, in accordance with section 4.1.1 of the Comprehensive Plan. For purposes of this License Article, all references to the Chelan-Douglas Land Trust refer to the Chelan-Douglas Land Trust or another organization selected pursuant to paragraph (a)(6) of this License Article. The goal is to secure easements on 400 acres of land, and priority shall be given to acquiring easements on lands between elevations 1,100 and 1,400 ft.
>
> (2) **Administrative Fees** (LC09a2). Chelan PUD shall make available additional funding of up to 15% of the cost of easement acquisition, not to exceed $33,000 to the Chelan-Douglas Land Trust, for fees associated with easement acquisition. Associated fees include administrative costs, appraisals, baseline inventories, escrow fees, hazardous substance assessments, legal fees, recording fees, stewardship fees, surveys, and fees relating to title reports and insurance.
>
> (3) **Habitat Improvements** (LC09a3). Chelan PUD shall make available $32,000 to the Chelan-Douglas Land Trust, for shrub-steppe/mule deer winter-range habitat restoration efforts on the lands, if any, for which an easement is acquired under paragraph (a)(1) of this Article. Beyond making the $32,000 available, Chelan PUD shall have no responsibility for the success of the restoration efforts to be carried out by the Chelan-Douglas Land Trust, in coordination with Washington Fish and Wildlife. In its contract with the Chelan-Douglas Land Trust, Chelan PUD shall require the Chelan-Douglas Land Trust to coordinate with Washington Fish and Wildlife in order to assure the highest likelihood of habitat restoration success.

Background for Conservation Easement Acquisition

Because snow depth increases with elevation, winter is the most difficult season for wildlife survival in north central Washington. Wildlife that typically reside at higher elevation during the summer concentrate at lower elevations in the winter where snow depth is lower and forage is available. The area of primary focus for acquisition of conservation easements on private lands is located along the north shore between Gold Creek and Camas Creek (Figure 1) at elevations between 1,200 and 1,400 feet Mean Sea Level (MSL). Information gathered from Chelan PUD Winter Wildlife Surveys (Chelan PUD 2013) shows up to 40% of mule deer observed during surveys congregate along this five-mile reach of private ownership. Bighorn sheep are also common in this area. The habitat in these areas may be critical for overwinter survival of mule deer and bighorn sheep and includes crucial bighorn sheep lambing habitat. According to WDFW, securing conservation easements to limit development on these lands, other than lakefront property (between 1,100 and 1,200 ft MSL), will protect lower elevation wildlife habitat that is contiguous with and additional to the surrounding USDA Forest Service lands.

Proposed Activity (2013-2017)

During the initial five-year Lake Chelan WHP, Chelan PUD searched for a partner to hold conservation easement acquired on behalf of WDFW as required under Article 406. In 2011, Cascadia Conservation District (a nonprofit conservation agency) agreed, in principle, to hold easements on behalf of WDFW. In 2011, Chelan PUD contracted with the Cascadia Conservation District, in consultation with WDFW, to conduct an assessment of landowners to determine potential interest in conservation easements. Results of the assessment showed that there was sufficient interest to pursue conservation easements in the area between Gold Creek and Grade Creek (Figure 1).

For the 2013-2017 WHP, Chelan PUD, WDFW, and the Cascadia Conservation District will continue to develop conservation easement language and will pursue easements on a sufficient number of acres to benefit wildlife. If the conservation easements are acquired, then the habitat funds will be available to implement upland (LC09a3) and riparian (LC09c2c) habitat improvement measures approved during in the first Lake Chelan WHP. Funding available for this measure is shown in Table 1.

2.2 Wildlife Winter Wildlife Surveys and Feeders

Settlement Agreement Article 9(b) of Appendix A of the Project License describes Chelan PUD's requirement to conduct wildlife surveys:

> (3) Chelan PUD, in coordination with WDFW, shall continue to conduct wildlife surveys similar to those conducted during the second FERC license for the Project, maintain upland bird feeders, and/or conduct habitat improvement projects for a cost not to exceed $10,000 per year during the term of the New License, and any subsequent annual licenses.

During the initial five-year Lake Chelan WHP Chelan PUD conducted 58 winter wildlife surveys and filled all three upland game feeders annually (Chelan PUD 2013). Annual summaries of the winter wildlife survey were provided to the FERC, WDFW, USDA Forest Service, USFWS and NPS by April 30 each year. For the 2013-2017 WHP, Chelan PUD will continue to conduct up to 12 winter wildlife surveys and report the results to the FERC, WDFW, USFS, USFWS, and NPS by April 30 of each year as required.

Methods and Background

A total of 12 surveys will be scheduled each winter (2013-2017) with three surveys during four different periods, including; early winter (mid November – early December), mid-winter (mid December - early January), late winter (February), and green-up (March). A minimum of two people will conduct the surveys from an open top boat driven at a slow speed (approximately 25 miles per hour) up one side of the lake and down the other, stopping as necessary to count and classify animals. The begin and end points of the survey will remain the same (Figure 1) and include First Creek (south shore lake mile 13.1) and Willow Point (north shore lake mile 14.0). The shoreline travelled first will alternate each survey to equalize morning and afternoon

sighting opportunities along each shore. Chelan PUD will continue to record all obvious wildlife observed on each survey including; ungulates, furbearers, waterfowl (ducks and geese), water birds (grebes, loons, gulls, etc.) and raptors during each winter wildlife survey conducted.

In accordance with FERC's order modifying and approving the initial WHP, Chelan PUD will continue to maintain and fill three upland game bird feeders located on the north shore of Lake Chelan between Mitchell Creek and Deer Point. Feeders will be inspected and filled with wheat annually as a winter food source for upland birds prior to the onset of winter.

2.3 USDA Forest Service Habitat and Wildlife Enhancement 2013-2017

Settlement Agreement Article 9(b) of Appendix A of the Project License describes the methods and funding for USDA Forest Service habitat and wildlife enhancement measures:

(1) Chelan PUD shall make available to the USDA Forest Service $20,000 per year during the term of the New License, and any subsequent annual licenses, for habitat and wildlife enhancement measures identified in section 3 of Chapter 9 of the Comprehensive Plan.

The following are USDA Forest Service upland habitat improvement projects planned to be implemented with the funding identified previously, which include native plant seed collection and propagation, thermal cover planting, habitat restoration through planting and thinning, pheromone treatments to protect forests from bark beetle infestation, control of invasive species, rehabilitation of riparian sites impacted by recreation, closure and rehabilitation of unauthorized travel routes, and prescribed burning. Prescribed burning is a treatment method used extensively by the USDA Forest Service for forest restoration (USFS 2002) and is illustrated by projects described in this section. Prescribed burning provides benefits to all species dependent on shrub steppe habitat by reducing the amount of available fuels and, therefore, the severity of summer wildfires. Prescribed burning also rejuvenates plant communities that have evolved with fire, thereby improving habitat conditions for all species dependent on shrub steppe and grassland habitats. Recent USDA Forest Service research has focused on the benefits to, and responses of, avian species from prescribed burns (Lyons et al. 2007; Gaines et al. 2007). Additionally, prescribed burning provides acceleration of a sustainable dry late-successional ponderosa pine forest and the species dependent on this type of forest such as pileated woodpeckers, marten, white-headed woodpeckers, pygmy nuthatch, Western gray squirrel, and spotted owls.

These projects are placed in order of project readiness to some degree but due to the changing nature of our fire prone landscape, and the unpredictability of opportunities to partner these projects with both internal and external funding sources and implement projects with the greatest potential benefit to wildlife and habitats, the priority of these projects will change as conditions and circumstances warrant. Some tasks carry-over from the initial WHP (Chelan PUD 2013) and, therefore, have the same task number, but the order of projects is by priority, rather than by task number.

Task 1: Native Plant/Seed Propagation and Increase Program
Continue native seed collection and propagation for use in habitat improvement projects. Native seed to be collected and increased would include blue bunch wheatgrass, Idaho fescue, pinegrass, Sandberg's bluegrass, other native grasses, low elevation cedar, Pacific dogwood, native shrubs such as kinnikinnik, and native forbs including penstemon, yarrow, and lupine. Estimate $1,500 per year to produce seed for 5-20 acres (cost effectiveness will increase as yields increase over time). Seeding native species to compete with non-native invasive plants will be essential mitigations to prescribed burning conducted for habitat improvement in some portions of the winter range. Seeding in itself constitutes an improvement in habitat by improving forage for wildlife. Projects may be conducted in conjunction with propagation of native plants for Chelan PUD funded erosion control, which could include shrubs and trees such as bitterbrush and dogwood.

Task 16: Pot Peak (Shady Pass Late Successional Reserve Forest Restoration Project
The Pot Peak area (Figure 2) of 25-Mile Creek, both within and outside of the Late Successional Reserve (LSR), burned with mixed severity in the 2004 Pot Peak Fire. Due to a combination of the relatively low severity with which the fire burned in some areas, and the post-fire application of bark beetle anti-aggregant pheromones, many of the large trees have survived the fire, and the area supports the only pair of spotted owls known in the lower Lake Chelan Basin. There are, however, many dead trees in the area that are beginning to rot and fall and starting to rebuild a fuel bed that may lead to future high severity wildfires that threaten the sustainability of the remaining late-successional habitat. In similar habitats where re-burns have occurred 20-30 years after the first fire, high severity fire and total loss of the habitat have occurred. With this project, we propose to use low intensity prescribed burning to reduce fuels as they accumulate rather than after they accumulate, on a fire return cycle that is similar to the 5-15 year return interval typical of these ponderosa pine dominated forests. Specific treatment areas and treatments will be identified in the First 25 Forest Restoration Planning project that is currently in progress. Prescribed burning would likely be conducted by aerial ignition in the fall, with an estimated cost of $52 per acre over an area to be determined based on the results of the Forest Restoration Strategy model. Species that would likely benefit from this treatment would include spotted owls, white-headed woodpeckers, pygmy nuthatches, and other species dependent on dry forest habitat that supports large old-growth ponderosa pine.

Task 6: North 25 (Shady Pass Late-Successional Reserve) Restoration
High severity fire has burned almost entirely through the Chelan side of the LSR in the North Fork of 25-Mile Creek. In sustainable locations, some areas will require planting to accelerate reestablishment of a forest that can again support species dependent on late-successional habitats. Pre-commercial thinning in areas where seed sources are abundant or remnant "dog-hair" stands are present will also help accelerate development of late-successional habitat. Funds for planting and thinning are limited in availability through standard National Forest programs due to the non-commercial nature of this land allocation. The North 25 planning area (Figure 2) is approximately 4,140 acres, with approximately 100 acres of planting and 100 acres of thinning needs currently identified. Additionally, more and more acres each year are becoming ready for the reintroduction of fire (see also 25-Mile Creek key winter range prescribed burning). Preliminary cost estimates for the first 200 acres of planting and thinning are approximately $46,000, and cost estimates for burning in the Darby Draw portion of the project area are

approximately $20,000. Additional acres may be identified through the First 25 Forest Restoration Planning project and treated by partnering Chelan PUD funds with Forest Service fuels, reforestation, and/or watershed improvement funds if they become available. Acceleration of a sustainable dry late-successional forest would benefit many late-successional species known to occur in the area including pileated woodpeckers, marten, white-headed woodpeckers, and spotted owls.

Task 17: First Creek Forest Restoration

The First Creek area (Figure 2), including Lafferty Canyon and portions of Granite Falls Creek, burned in the Tyee Fire of 1994, and fuels from the fire and from post fire regrowth of vegetation have been accumulating in the intervening years. Much of this area is at or past the point where fuel reduction work needs to be initiated to prevent fuel accumulations that will not only result in additional stand replacement fires, but will remove seed sources that would provide for natural recovery of the vegetation. Thinning and prescribed burning treatments are needed throughout the watershed (Figure 2), and planting may be indicated in the Slide Peak LSR (Ponderosa Pine ecosystem) that reburned in the summer of 2012. Specific treatments and project units will be identified in the First 25 Forest Restoration Planning project. Approximately $20,000 would be set aside for this project area, and would likely be partnered with funds from the fuels and watershed restoration programs to increase acres treated. Treatments that increase the sustainability and improve the reestablishment of forested conditions in the First Creek watershed will benefit all species dependent on late-successional habitat conditions in ponderosa pine and other dry forest types, as well as in more mesic habitats at higher elevation. Thinning and burning in young stands at lower elevations will also improve thermal cover conditions for ungulates and their predators.

Task 8: 25-Mile Creek Key Winter Range Prescribed Burning

A five-year fire return interval for this area following the 2004 Pot Peak and Deep Harbor Fires started in 2009 for prescribed burning (approximately 2,182 acres in the Box Canyon area and 454 acres in the Grouse Mountain area). Some limited areas did not burn in the 2004 and 1998 wildfires, or in prescribed burns conducted in the mid-late 1990s. These areas (Figure 2) would be available for immediate prescribed burning implementation (700 acres in 2 potential burn units). These projects will likely involve some level of weed control mitigation. Costs are estimated at $85 per acre for hand lighting and a total of $29,750 each for the two units that remain unburned. Benefits are as described for other winter range improvement projects, except that this area does not support bighorn sheep, rather, it supports more mid to late successional ponderosa pine forest and the species dependent on this type of forest (e.g., white-headed woodpecker, pygmy nuthatch, Western gray squirrel).

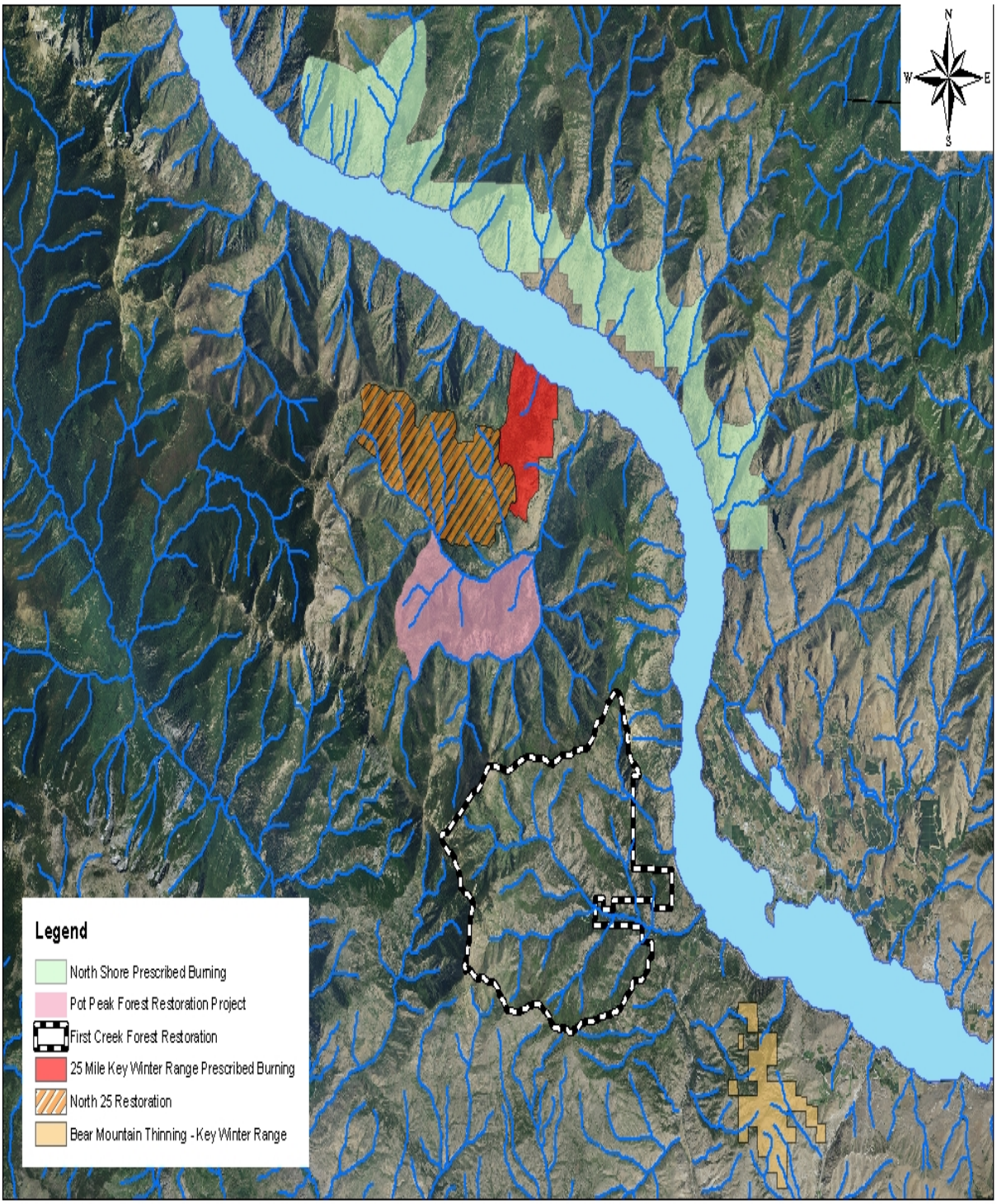

Figure 2. USDA Forest Service Habitat Improvement Projects, Lake Chelan 2013-2017.

Task 15: Lucerne Late-Successional Reserve Restoration

When the initial WHP was prepared in 2007, the Lucerne LSR (total of 8,420 acres) was the only LSR on the Chelan Ranger District that had not burned in stand replacement fires during the last 10 years, and had seen very little fire in the previous 99 years. In 2007, the southern portion of the Lucerne LSR experienced a mostly low to moderate severity wildfire. The northern portion remains unburned at this time. Approximately 70% of the LSR is dry forest and has a fire return interval of approximately 5-15 years. Prior to the fire, modeling showed that 95% of the LSR was at high risk of stand replacement fire and at high risk of ignition. The burned portion of the LSR will be ready for a fuel reduction prescribed burn at any time within this next five-year planning period (Figure 3). Additionally, the need for fuel reduction treatments in the unburned portion of the LSR has become critical because of the need to retain the remaining large tree and old growth habitat present in the area.

To address these needs, we will prepare two prescribed burn plans (approximately $5,000 each), one for the Domke Mountain area in the burned portion of the LSR and one for the Lightning Ridge area located in the unburned portion of the LSR (Figure 3). These plans could be used with either planned or natural ignitions to implement low severity burning within the LSR and reduce accumulated fuels, and the risk of stand replacement fire. Timing of implementation will depend on natural ignitions, funding availability to conduct an Environmental Analysis (EA) for a planned prescribed burn, and/or fuel accumulation as fire and insect killed trees fall to the ground. To accelerate our ability to implement a planned prescribed burn before a natural ignition removes the opportunity, habitat improvement funds may also be used to fund the EA (up to $10,000) for the fuel reduction project.

Due to the uncertain timing of suitable burning conditions, we are also proposing the potential use of anti-aggregant bark beetle pheromones (MCH and Verbenone) to reduce bark beetle attack during periodic insect outbreaks to improve the likelihood of retaining large diameter Douglas-fir and pines within the LSR. These treatments can range from $5,000 to $30,000 depending on the method of application and the size and number of areas treated. Using a combination of prescribed fire and anti-aggregate pheromones at appropriate intervals to manage fuel accumulations will help retain remaining late-successional features of the area, encourage development of late-successional habitat features in the future, and return the area to a fire adapted, sustainable ecosystem.

Figure 3. USDA Forest Service Lucerne LSR Habitat Project, Lake Chelan, 2013-2017.

2.3.1 Contingency Projects

The following list of projects are contingency projects that could be implemented, instead of those projects described previously in this section, as USDA Forest Service funding becomes available or priorities change in the future. Depending on current conditions and project readiness, some of these projects may be implemented instead of the priority projects.

Task 5: Prescribed Burning on the North Shore between Safety Harbor and Antilon Creek
Prescribed burning benefits all species dependent on shrub steppe, grassland, and low elevation ponderosa pine habitat by reducing fuels and, therefore, the severity of summer wildfires. Prescribed burning also rejuvenates plant communities that have evolved with fire, thereby improving foraging habitat conditions for all species dependent on these habitats on the North Shore. A five- to ten-year fire return cycle began in 2007 following the 2002 Deer Point Fire. This area supports roadless and un-roaded winter range (11,650 acres). Many of the potential prescribed burn units in this area (Figure 2) will require weed control for project mitigation and may require completion of an EA for use of herbicide in an Integrated Weed Management (IWM) plan for noxious weed control. In some areas where weed infestations are determined to be lower, post-burn seeding may be sufficient to mitigate for noxious weed concerns. There are also some limited areas where noxious weeds are not present and implementation could begin as soon as the area is determined to be weed free. Cost per acre in range from an average of $52 per acre (500 acre minimum) for aerial ignition to approximately $85 per acre for hand lighting. Burning will improve foraging habitat conditions for bighorn sheep and mule deer. By restoring fuel levels and ecosystem processes, prescribed burning will restore important habitats for many other species dependent on shrub steppe, grassland, and low elevation ponderosa pine habitats.

Task 7: Bear Mountain Thinning – Key Winter Range
Many acres of fuel reduction treatments were completed in the Bear Mountain area during the initial WHP period by partnering Chelan PUD wildlife habitat improvement funds with USDA Forest Service fuel reduction funds. There may be additional treatments that develop in this area (Figure 2) during the 2013-2017 WHP. Any additional treatments would be focused on reducing ladder fuels and reducing risk of losing snow-intercept/thermal cover to wildfire. Thinning would also speed development of larger trees and canopies, and reduce potential loss of thermal cover to insects and disease. Prescribed burning is not currently an option due to proximity of this area to private residences. Costs to thin, prune and pile are variable but range around $250 to $350 per acre, and approximately $10,000 would be allocated for any additional treatments that are identified. Variation in the costs is due to size of material being removed access issues, and the pool of potential contractors, so the number of acres treated cannot be estimated at this time. Treatments would improve the condition and sustainability of thermal cover and snow intercept cover for mule deer, and would benefit all species dependent on mature to late-successional dry Douglas-fir and ponderosa pine forest.

Task 9: Antilon Lake
The Antilon Lake area is a unique riparian habitat located in an area of dry forest and shrub steppe habitat that is very close to the local communities of Chelan and Manson. The area is heavily used by recreationists at certain times of the year, and the habitat has been impacted by unauthorized motorized travel, excessive dispersed camping, lack of adequate sanitation

facilities, harvest of and other damage to green trees and vegetation, removal of downed woody debris important to small mammals, garbage dumping, and other forms of resource damage. The situation is further complicated by multiple ownerships and mixed jurisdiction.

This project involves working with the US Forest Service Recreation staff and other landowners to focus recreational use on designated campsites and restrict all motor vehicles to designated routes (implement the new USDA Forest Service Travel Management Plan). Dispersed riparian campsites would be rehabilitated and new non-riparian recreation sites would be developed, as well as public parking, fishing access, non-motorized trails that include a "Watchable Wildlife" opportunity, and interpretive signs and/or bulletin boards. Specific wildlife components of the project include removing old fences that are a hazard to wildlife (up to 1,100 feet), enhancing aspen stands, implementing travel restrictions per the new USDA Forest Service travel management plan, and partnered use of funds to rehabilitate riparian sites and locate new non-riparian recreation sites. Chelan PUD wildlife funds allocated to this project are initially estimated at $10,000, though additional funds may be used if partnerships are developed. Recreation infrastructure portions of the project may be implemented through grant funding, cooperative agreements, and in-kind services with other land management agencies in the Antilon Lake area. Improvement of habitat in this area would benefit all riparian dependent species and species associated with dry forest and shrub steppe habitats. Habitat improvement will also result though a greater appreciation of wildlife resulting from development of Watchable Wildlife opportunities.

Task 10: Echo Ridge Forest Recovery

This 12,000 acre area continues to suffer the adverse effects of severe stand replacement fire. The severity of the fire removed most of the nutrients and organic matter in the soil, which has limited the establishment and growth of the young forest. Where vegetation is limited, recreationists have created user-built trails and off-road vehicle routes, and/or reestablished use on closed roads.

Restoration activities include micro-site planting of conifers to establish seed sources in key areas, soil amendments to boost soils depleted by the severity of past fires, obliteration of unauthorized routes, pre-commercial thinning, invasive plant control, and burning activities to improve forest growth and reduce the risk of losing the recovering forests and additional soil nutrients to future wildfires. Approximately $10,000 would be allocated to this project. Restoration of the ponderosa pine and Douglas-fir dry forest in this area will improve habitat conditions for many key species of concern in the area, particularly those dependent on ponderosa pine ecosystems (e.g., white-headed woodpeckers and Western gray squirrels).

Task 11: White Bark Pine Habitat Protection and Enhancement

Whitebark pine on the Chelan Ranger District has recently been under attack by the mountain pine beetle and blister rust. This high elevation habitat is extremely important to ecosystem function and to several key species such as the Grizzly Bear. Helicopter application of Verbenone (a bark beetle anti-aggregant pheromone) to areas that would otherwise be inaccessible to treatment will protect an ecologically important tree species and the wildlife species dependent on it. Brood tree removal, release of Whitebark pine by thinning out other conifers competing for water and nutrients, seed collection and propagation, and planting of

blister resistant strains of whitebark pine are also potential enhancement measures that may be implemented during the planning period. Approximately $30,000 will be allocated to planning and treatment of Whitebark Pine stands in the Sawtooth Ridge area.

***Task 12: Crupina* Control on Wilderness Winter Range**

Work will continue *Crupina* control and native grass seeding. *Crupina*, which is a Class A noxious weed that requires eradication, infests the majority of the winter range that lies within the Lake Chelan Sawtooth Wilderness. Eradication of this weed, and restoration of the native plant community, will result in restoration of a wilderness winter range for both mule deer and mountain goats. Winter range protected by wilderness status is extremely rare and valuable, as it has the capability of providing for ungulates as well as their predators, including threatened and endangered species such as the grizzly bear and gray wolf that require remote habitat conditions for security. Additionally, control and eventual eradication of this noxious weed population (the only known *Crupina* infestation in the State of Washington) will protect the productivity and functionality of shrub steppe habitats throughout the Lake Chelan Basin and the state. The project is currently partnered with the Washington Conservation Corps, the Washington State Department of Agriculture, various land owners, and various research entities. Funds may be used in any increment of $8,000.

Task 13: North Shore Winter Range Weed Control Program

Use of an IWM program to effectively reduce weed infestations on the north shore will require NEPA to engage in herbicide application. The development of an IWM that includes herbicides is a precursor to initiation of any effective weed control projects on the winter range. Weed control is an essential mitigation to other habitat improvement activities such as prescribed burning. We may be able to cover this activity with a new forest-wide EIS in the 2013-2017 WHP, but funding the project through, or in conjunction with, Chelan PUD habitat improvement funds will expedite effective weed control. Estimate $20,000 for EIS to treat weeds on all or a part of the north shore winter range (11,971 acres of planning area). Weed control on winter range would benefit mule deer and bighorn sheep, as well as carnivores dependent on these ungulates, and other species dependent on shrub steppe, grassland and low elevation ponderosa pine habitats.

Task 18: Road Closures

Throughout the roaded portion of the Chelan Ranger District on both the Lower North and South Shores, recreational use of old roads, closed roads, and unauthorized travel routes disrupts wildlife and their habitats, particularly following fires that remove obstructing and obscuring vegetation and in areas where slopes are less steep. The project involves installing or replacing gates, installing or rebuilding closure structures (rock or log barriers, deep ditches), obscuring unauthorized travel routes by covering routes with log and rock debris and/or planting vegetation, restoring slope drainage, and/or completely out-sloping and obliterating the travel-way. Routes to be treated will be identified in USDA Forest Service restoration planning documents or in the field as they develop. Approximately $20,000 will be allocated to this project. Costs will vary with the type of closure so the number of closures or the length of travel-way treated is currently unknown. Chelan PUD funds will only be for initial capital project costs (one-time), ongoing maintenance necessary to maintain closures will not require Chelan PUD funds.

Task 14: Weed control activities

On-going in all project areas, but may be stand-alone projects in areas where prescribed burning is either not an option (e.g., near private land) or is not needed. Treatment areas will be determined during the environmental analysis process to develop an IWM plan for the winter range or other project areas.

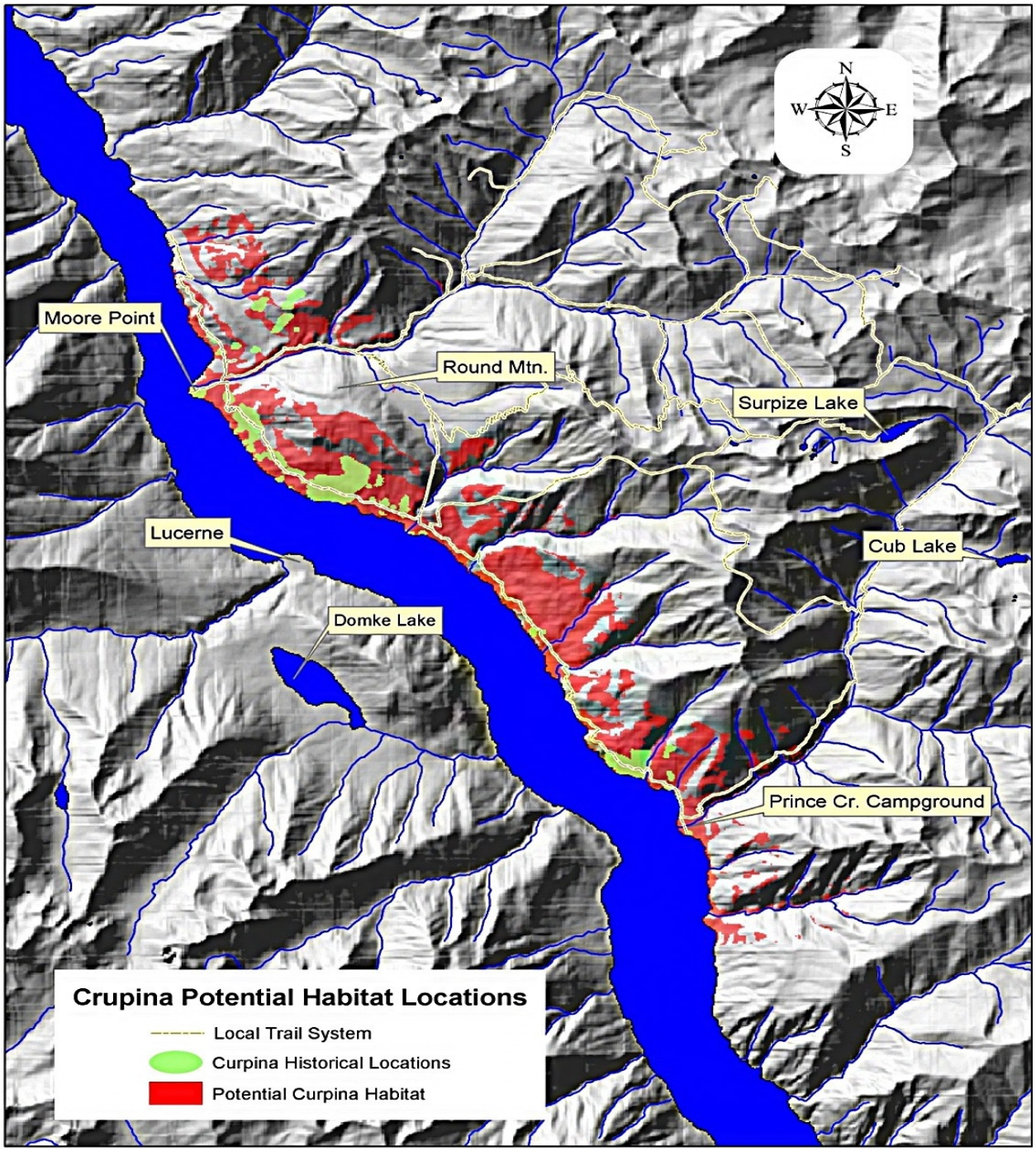

Figure 4. USDA Forest Service Potential *Crupina* Control Areas along Lake Chelan, 2013-2017.

SECTION 3: RIPARIAN HABITAT IMPROVEMENTS

As specified in License Article 406 and Settlement Agreement Article 9 of the Appendix A of the License, Chelan PUD will provide funds for riparian habitat improvements.

None of the riparian habitat improvement measures described in this section requires annual or periodic maintenance to ensure their success; therefore, no riparian habitat lands need be brought into the Project boundary.

3.1 Funding for USDA Forest Service Riparian Habitat Improvements

Settlement Agreement Article 9(c) of Appendix A of the Project License describes Chelan PUD's requirement for making funds available to the USDA Forest Service for riparian habitat improvements:

> (2) Within 180 days of the effective date of the New License, Chelan PUD shall make available:
>
> (A) $50,000 to the USDA Forest Service to enhance riparian habitat in the Lake Chelan basin;

The following list includes activities within the Lake Chelan basin associated with riparian habitat enhancement for the USDA Forest Service.

Task 1: Low Elevation Tree Planting
Seed for low elevation lakeshore plant species (cedar, cottonwood, dogwood, various shrubs, and ponderosa pine for lakeshore perching habitat) needs to be collected in order to have seedlings available for planting. Collection would occur in August or September of 2013. Work for low elevation seed collection and propagation include two people plus boat and operator for 2-3 days ($3,000) and seed processing and management ($500) for a total cost of $3,500. Once the lakeshore trees and/or shrubs are ready, two to three sites per day can be planted at a cost of approximately $1,000 per day including boat transportation. Costs will continue to accrue with continued lakeshore plant species propagation.

Task 2: Mid Elevation Tree Planting
Western cedar trees (510) propagated under the initial WHP will be available for riparian planting in 2013. Planting should take two days, three people and cost approximately $1,600-$2,000. Trees will be planted in mid-elevation areas along streams.

Article 406(b)(2) requires a "description of the lands subject to riparian habitat enhancements …" In this case, the proceeding list provides as much detail as possible due to the fact that the location of riparian enhancements cannot be stated exactly at this time due to future changes in environmental conditions.

3.2 Funding for Washington Department of Fish and Wildlife Habitat Improvements

Settlement Agreement Article 9(c) of Appendix A of the Project License describes Chelan PUD's requirement for making funds available to the WDFW for habitat improvements:

> (2) Within 180 days of the effective date of the New License, Chelan PUD shall make available:
>
> (C) $35,000 to the WDFW to enhance habitat in the Lake Chelan basin.

WDFW recommends reserving expenditure of these funds until after conservation easements are acquired. As noted in section 2.1, the area of primary focus for acquisition of conservation easements on private lands is located on the north shore between Gold Creek and Camas Creek (Figure 1) at elevations between 1,200 and 1,400 feet MSL. Once easements are acquired, funding from this source could be used to provide additional habitat restoration or enhancement activities on lands where easements are acquired, or for other habitat enhancements projects in the Chelan basin. Due to the uncertainty at this time of the precise location of lands where restoration efforts would be most valuable, WDFW desires that Chelan PUD retain this funding until such time as specific habitat enhancement needs and projects are identified.

SECTION 4: IMPLEMENTATION SCHEDULE

Article 406 requires this plan to include a schedule for conducting improvements. Projects contained in this plan are placed in order of priority. However, due to the changing nature of our fire prone landscape, the unpredictability of opportunities to partner, projects having both internal and external funding sources, and the desire to implement projects with the greatest potential benefit to wildlife and habitats, the priority of these projects will change as conditions and circumstances warrant. Once approved, the initial WHP will expire and projects approved in the 2013-2017 WHP will begin.

Reporting

Annual Reports

As required by Article 406(a), Chelan PUD will provide an annual report of the results of winter wildlife surveys conducted under section 2.2 of this plan by April 30 for the next four years of this plan to the FERC, WDFW, USFWS, USDA Forest Service, and the NPS. In addition, Chelan PUD will file (by April 30 as noted above) an annual progress report with the FERC on work planned and completed each year.

Five-Year Wildlife Habitat Plan and Five-Year Summary Report

As required by Article 406(b), Chelan PUD will update and file the WHP for FERC approval, at a minimum, of every five years. A separate summary of work completed under each approved plan will be filed on the fifth year. The five-year summary report for the initial WHP (Chelan PUD 2013) will be submitted concurrently with this plan.

SECTION 5: FUNDING

Chelan PUD and Agency Payment Agreement

Reimbursement for work related to approved projects conducted by the USDA Forest Service and WDFW will be made in accordance with Section 19 of the Settlement Agreement. Table 1 reflects funding available and includes annual adjustments consistent with Section 19 of the Lake Chelan Settlement Agreement.

All payments for work conducted by the USDA Forest Service and WDFW will be in accordance with Section 19 of the Settlement Agreement. Funding will be provided on a reimbursement basis once the agency submits an invoice/variance form and only after review and approval by Chelan PUD. As a condition of payment for any work performed under the Settlement Agreement, the USDA Forest Service and WDFW must submit a certification that the work was performed in a manner consistent with the Settlement Agreement, as well as annual planning reports. The annual planning reports must document all work that was completed during the preceding year, and the actual cost of that work. In addition, they must contain a detailed description of the work to be undertaken in the current year, a general description of the work to be undertaken in the following year, and the estimated costs of that work. Planned and completed work provided by the USDA Forest Service and WDFW is summarized in the annual reports submitted to FERC by Chelan PUD.

Table 1. Funding for USDA Forest Service and WDFW for Habitat Projects 2013-2017.

AGMT ARTICLE	DESCRIPTION	5-YEAR ESTIMATED ACTIVITIES	TOTAL FUNDING AVAILABLE AS OF JANUARY 31, 2013
LC09a1	WDFW Conserv Easement Fund (Wildlife Plan)	Pursue Conservation Easements	$280,758.44
LC09a2	Cascadia Conserv Easement Fees (WDFW – Wildlife Plan)	Task 1: Conservation Easement acquisi. ..... Task 2, Item 4: Phase 2, Cascadia	$33,779.52
LC09a3	WDFW Habitat Fund (Wildlife Plan)	Pending Conservation Easements	$40,837.59
LC09b1	USFS Upland Habitat (Wildlife Plan)	Task 1: Plant/Seed Propagation ..... Task 5: Safety Harbor Burn..... Task 6: North 25 Restoration..... Task 7: Bear Mountain Thinning ..... Task 8: 25-Mile Creek Burn..... Task 9: Antilon Lake Habitat ..... Task 10: Echo Ridge Forest Recovery ..... Task 11: White Bark Pine Habitat Protection... Task 12: Crupina Control ..... Task 13: North Shore Weed Control ..... Task 14: Weed Control Activities ..... Task 15: Lucerne LSR Restoration……. Task 16: Pot Peak Restoration..... Task 17: First Creek…….. Task 18: Road Closures……..	$538,292.79
LC09c2A	USFS Riparian Habitat (Wildlife Plan)	Task 1: Planting..... Task 2: Plant Cedar Trees at Mid-Elevation..... Task 3: LWD Highgrade & Move at Prince Creek	$58,354.59
LC09c2C	WDFW Riparian Habitat (Wildlife Plan)	Pending Conservation Easements.....	$44,666.11
			$996,689.04

SECTION 6: LITERATURE CITED

Chelan PUD 2013. Lake Chelan Wildlife Habitat Report 5-Year Summary (2008-2013). Public Utility District No. 1 of Chelan County. Wenatchee, WA.

Eldred, T. E. 2007. Lake Chelan Wildlife Forum meeting, July 10, 2007.

Fielder, P.C. and C.E. McKay, Jr. 1984. Lake Chelan wildlife studies with emphasis on mountain goats and mule deer. Technical report of the Public Utility District No. 1 of Chelan County and the WA. Dept. of Game, Wenatchee, WA.

Gaines, W.L., M. Haggard, J. F. Lehmkuhl, A.L. Lyons, and R.J. Harrod. 2007. Short-term response of land birds to ponderosa pine restoration. In Press, Journal of Restoration Ecology.

Lyons, A.L., W.L. Gaines, J.F. Lehmkuhl, and R.J. Harrod. 2007. Short term effects of fire and fire surrogate treatments on foraging tree selection by cavity-nesting birds in dry forests of central Washington. In Review, Forest Ecology and Management.

USDA Forest Service 2002. Okanogan and Wenatchee National Forests Fire Management Plan, Chapter III, Section E - Fire Regimes and Disturbance Processes, Resource Benefits (pages 16-52).

APPENDIX A: CONSULTATION WITH STAKEHOLDERS

Article 406 of the Project License requires that the Wildlife Habitat Plan (WHP):

"… be developed in consultation with the U.S. National Park Service (Park Service), U.S. Forest Service (Forest Service), U.S. Fish and Wildlife Service, Washington Department of Fish and Wildlife, Confederated Tribes of the Colville Reservation, Yakama Nation, the Wenatchee Sportsman's Association, the Lake Chelan Sportsman's Association, the NCW Mule Deer Foundation, the Foundation for North American Wild Sheep, the Audubon Society, and the National Wild Turkey Federation. The licensee shall include with the plan documentation of consultation, copies of recommendations on the completed plan after it has been prepared and provided to the above entities, and specific descriptions of how the entities' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the entities to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information."

Chelan PUD has completed the consultation requirements, by consulting with the Lake Chelan Wildlife Forum (LCWF) for the 2013-2017 WHP. The LCWF convened on July 31, 2012 to discuss the requirement for a 5-year summary report and an updated 5-year WHP. Correspondence with individual agencies followed and on February 26, 2012, a draft 2013-2017 WHP was sent to the Lake Chelan Wildlife Forum for 30 day review with Comments due on April 1, 2013.

LCWF Membership List
Washington State Department of Fish and Wildlife
United States Department of Agriculture Forest Service
National Park Service
United States Fish and Wildlife Service
Confederated Tribes of the Colville Reservation (CCT)
Confederated Tribes of the Umatilla Indian Reservation (CTUIR)
Yakama Nation
Wenatchee Sportsman's Association
Lake Chelan Sportsman's Association
NCW Mule Deer Foundation
Foundation for North American Wild Sheep
Audubon Society
National Wild Turkey Federation.

30 Day Comments

A draft of this 5-year WHP was sent to the LCWF on February 26, 2013, for review. No comments were received by April 1, 2013. (See link, http://www.chelanpud.org/departments/licensingCompliance/LC_implementation/corres/40206.pdf.)

WILDLIFE HABITAT SUMMARY REPORT 2008-2012

LICENSE ARTICLE 406

5-Year Summary Final

LAKE CHELAN HYDROELECTRIC PROJECT
FERC Project No. 637

April 2013

Public Utility District No. 1 of Chelan County
Wenatchee, Washington

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

EXECUTIVE SUMMARY

The Federal Energy Regulatory Commission (FERC) Order on Offer of Settlement and Issuing New License (License) and Order on Rehearing for the Lake Chelan Hydroelectric Project No. 637 (Project) were issued November 6, 2006, and April 19, 2007, respectively, to the Public Utility District No. 1 of Chelan County (Chelan PUD). Article 406 of the new Project License required Chelan PUD to submit to FERC a Wildlife Habitat Plan (WHP) by November 6, 2007. On April 10, 2008, the FERC issued its order modifying and approving the initial WHP. In accordance with the order, Chelan PUD is required to file a five-year summary of the upland and riparian habitat improvement measures implemented during the initial WHP as well as a summary of the wildlife surveys to FERC.

Implementation of the initial WHP began soon after plan approval. Of the projects completed, Chelan PUD pursued the potential for acquiring conservation easements on behalf of the Washington Department of Fish and Wildlife (WDFW). For the period of 2008 to 2010, Chelan PUD pursued contracts with both the Chelan Douglas Land Trust and the Trust for Public Lands to facilitate conservation easement acquisition as required. However, neither entity was willing to enter an agreement with Chelan PUD to pursue conservation easement acquisition. In 2011, Chelan PUD entered into a contract with the Cascadia Conservation District to assess the potential for easement acquisition. Landowners were contacted and it was determined that private landowner interest was sufficient to purse conservation easement acquisition. Chelan PUD will continue drafting conservation easement language with the expectation that the Cascadia Conservation District will pursue easement acquisitions on behalf of WDFW in 2013. Once easements are acquired implementation of WDFW habitat improvement projects may begin.

During the initial WHP, the USDA Forest Service initiated several habitat improvement projects, including native plant propagation and planting, controlled burns, forest thinning, and noxious weed control. As required, Chelan PUD conducted 58 winter wildlife surveys along Lake Chelan and maintained three upland bird feeders. Winter Wildlife Survey summary reports were provided annually to the National Park Service (NPS), USDA Forest Service, U.S. Fish and Wildlife Service (USFWS), Washington Department of Fish and Wildlife (WDFW), and FERC. Chelan PUD also filled three upland game bird feeders each fall from 2008 to 2012 as required.

Projects that were not initiated may be carried forward to the 2013-2017 WHP, which will be filed concurrently with this summary.

SECTION 1: INTRODUCTION

The Federal Energy Regulatory Commission (FERC) Order on Offer of Settlement and Issuing New License (License) and Order on Rehearing for the Lake Chelan Hydroelectric Project No. 637 (Project) were issued November 6, 2006, and April 19, 2007, respectively, to the Public Utility District No. 1 of Chelan County (Chelan PUD). Article 406 of the new Project License required Chelan PUD to submit to FERC a Wildlife Habitat Plan (WHP) by November 6, 2007. On April 10, 2008, the FERC issued its order modifying and approving the initial WHP. In accordance with the order, Chelan PUD is required to file a five-year summary of the upland and riparian habitat improvement measures implemented during the initial WHP as well as a summary of the wildlife surveys to FERC

The initial WHP addressed both upland and riparian habitat improvements and winter wildlife monitoring in the Lake Chelan basin. Implementation of the WHP, as specified in Article 406 and Settlement Agreement[1] Article 9 of Appendix A of the License, entails Chelan PUD providing funds for: 1) upland habitat improvements consisting of conservation easement acquisition, upland habitat improvements, noxious weed control; and 2) riparian habitat improvements. Additionally, Chelan PUD will conduct wildlife surveys in the Lake Chelan basin. None of the habitat improvement measures (riparian or upland) required annual or periodic maintenance to ensure their success; therefore, no habitat lands were brought into the Project boundary.

The initial WHP was developed in consultation with the Lake Chelan Wildlife Forum (LCWF), which includes the National Park Service (NPS), USDA Forest Service, U.S. Fish and Wildlife Service (USFWS), Washington Department of Fish and Wildlife (WDFW), Confederated Tribes of the Colville Reservation, Yakama Nation, Wenatchee Sportsman's Association, Lake Chelan Sportsman's Association, NCW Mule Deer Foundation, Foundation for North American Wildlife Sheep, Audubon Society, and National Wild Turkey Federation. Documentation of the consultation that occurred during preparation of this summary report is attached as Appendix A.

From 2008 to 2012, funds allocated under the initial WHP were expended on resources that were the most valuable to wildlife and most compatible with wildlife land use in Chelan County. Those lands will include key habitat types, migration corridors, and shrub steppe, grassland, and riparian/wetland habitats that offer restoration or improvement opportunities. The primary goal of the WHP is to enhance wildlife habitat within portions of Chelan County bordering Lake Chelan to:

i) Restore, maintain, or improve ecological quality and diversity;
ii) Restore, maintain, or increase habitat for key indicator wildlife species; and
iii) Provide for public use compatible with the ecological quality, diversity, and carrying capacity for key wildlife species goals.

[1] Chelan PUD, on behalf of the signatories, filed a Comprehensive Settlement Agreement on October 17, 2003. The settlement agreement includes articles that were included in the License as Appendix A.

Primary wildlife indicator species for purposes of the WHP include: 1) mule deer and bighorn sheep; 2) threatened, endangered, sensitive, species of concern, or survey and management species; and 3) riparian and wetland indicator bird and amphibian species.

The WHP focuses primarily on big game species because the LCWF places a high value on protecting and enhancing habitat for species that overwinter in the Chelan Basin, which are mule deer, bighorn sheep, and mountain goats (Eldred, pers. com.). However, it was important to the LCWF that the same measures implemented for the benefit of big game also benefit a broad community of terrestrial wildlife, including avian species. Most of acreage surrounding Lake Chelan is shrub-steppe and riparian habitat; hence, the plan emphasizes enhancement projects for these types of habitats.

SECTION 2: UPLAND HABITAT IMPROVEMENTS & WILDLIFE SURVEYS

Implementation of upland habitat improvements, as specified in License Article 406 and Settlement Agreement Article 9 of Appendix A of the License, entails Chelan PUD providing funds for conservation easement acquisition, habitat improvements, and noxious weed control. Additionally, Chelan PUD conducted wildlife surveys in the Lake Chelan basin and filled three upland bird feeders annually.

None of the upland habitat improvement measures implemented required annual or periodic maintenance to ensure their success; therefore, no lands were brought into the project boundary.

2.1 Conservation Easement Acquisition

Settlement Agreement Article 9(a) of Appendix A of the Project License describes Chelan PUD making funds available for acquiring conservation easements on private lands on the north shore of Lake Chelan.

> (1) **Easement Acquisition** (LC09al)**.** (1) Chelan PUD shall make available $220,000 to the Chelan-Douglas Land Trust, for the acquisition of conservation easements in perpetuity on privately-owned lands located on the north shore of Lake Chelan, in accordance with section 4.1.1 of the Comprehensive Plan. For purposes of this License Article, all references to the Chelan-Douglas Land Trust refer to the Chelan-Douglas Land Trust or another organization selected pursuant to paragraph (a)(6) of this License Article. The goal is to secure easements on 400 acres of land, and priority shall be given to acquiring easements on lands between elevations 1,100 and 1,400 ft.
>
> (2) **Administrative Fees** (LC09a2). Chelan PUD shall make available additional funding of up to 15% of the cost of easement acquisition, not to exceed $33,000 to the Chelan-Douglas Land Trust, for fees associated with easement acquisition. Associated fees include administrative costs, appraisals, baseline inventories, escrow fees, hazardous substance assessments, legal fees, recording fees, stewardship fees, surveys, and fees relating to title reports and insurance.
>
> (3) **Habitat Improvements** (LC09a3). Chelan PUD shall make available $32,000 to the Chelan-Douglas Land Trust, for shrub-steppe/mule deer winter-range habitat restoration efforts on the lands, if any, for which an easement is acquired under paragraph (a)(1) of this Article. Beyond making the $32,000 available, Chelan PUD shall have no responsibility for the success of the restoration efforts to be carried out by the Chelan-Douglas Land Trust, in coordination with Washington Fish and Wildlife. In its contract with the Chelan-Douglas Land Trust, Chelan PUD shall require the Chelan-Douglas Land Trust to coordinate with Washington Fish and Wildlife in order to assure the highest likelihood of habitat restoration success.

From 2008 to 2010, Chelan PUD sought agreements with the Chelan Douglas Land Trust and the Trust for Public Lands to facilitate easement acquisition but was not successful. In November 2010, Chelan PUD entered into a contract with the Cascadia Conservation District after

consultation with WDFW. The purpose of the contract was to determine landowner interest in conservation easements. In 2011, the assessment showed that there was sufficient interest to pursue conservation easements in the area between Gold Creek and Grade Creek (Figure 1). Currently, Chelan PUD, WDFW, and the Cascadia Conservation District are drafting conservation easement language. In 2013, Chelan PUD plans to enter into another agreement with the Cascadia Conservation District to pursue conservation easement acquisition along the north shore of Lake Chelan on behalf of WDFW with funds made available by Chelan PUD. If the conservation easements are acquired with funds made available from Chelan PUD (LC09a1), then the habitat funds (LC09a3) will be available to manage the lands under conservation easement.

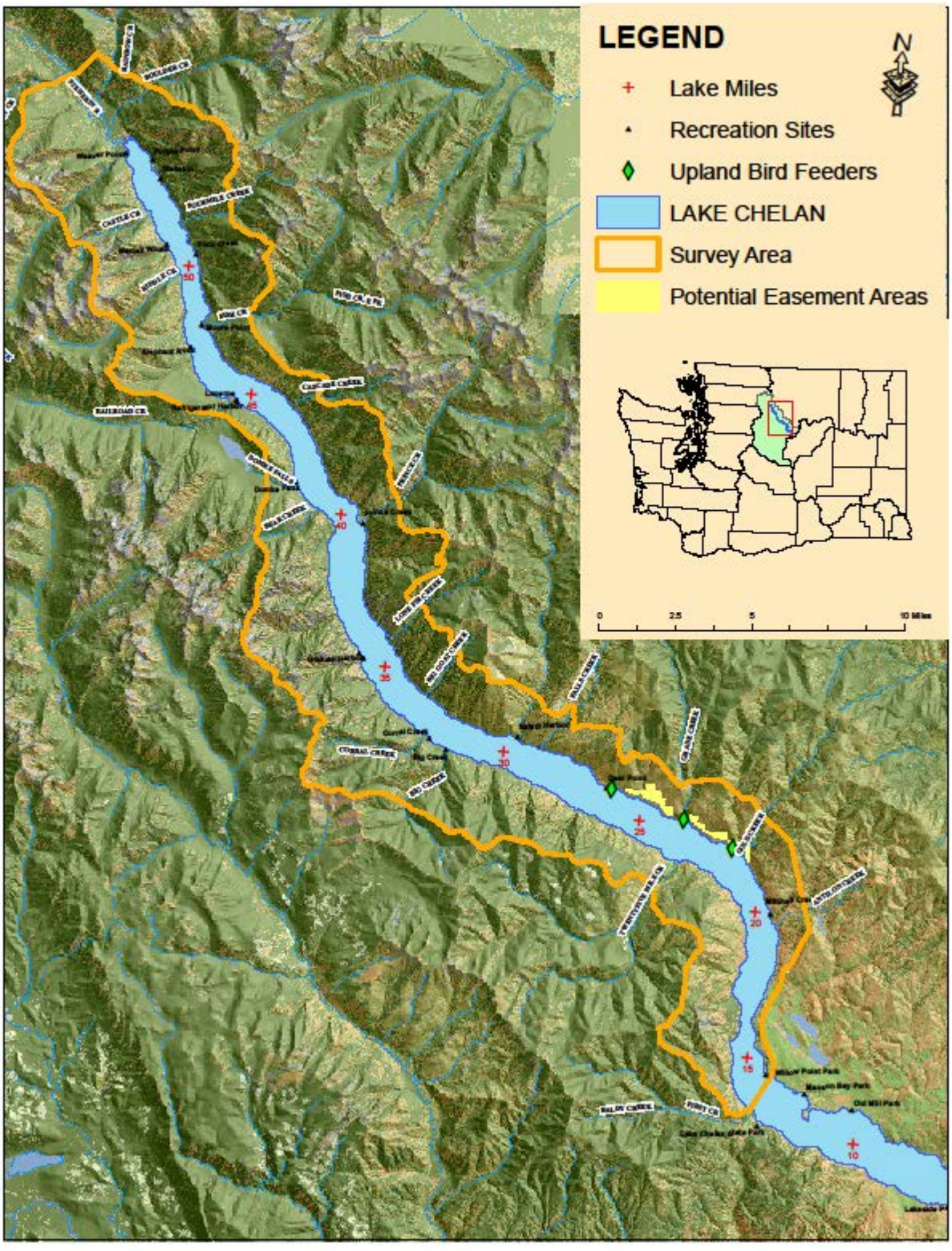

Figure 1: Lake Chelan Wildlife Habitat Plan Vicinity Map, 2008-2012.

2.2 Funding for USDA Forest Service

Settlement Agreement Article 9(b) of Appendix A of the Project License describes the methods and funding for USDA Forest Service habitat and wildlife enhancement measures.

> (1) Chelan PUD shall make available to the USDA Forest Service $20,000 per year during the term of the New License, and any subsequent annual licenses, for habitat and wildlife enhancement measures identified in section 3 of Chapter 9 of the Comprehensive Plan**.**

2.2.1 Upland Habitat Improvements under LC09b1

The following is a list of approved tasks proposed by the USDA Forest Service in the initial WHP with a summary of work completed during the period of 2008 to 2012. Table 1 summarizes the status of the USDA Forest Service tasks and if these projects have been completed or will be carried over to the 2013-2017 WHP.

Projects include native plant seed collection and propagation, thermal cover planting, habitat restoration through planting and thinning, and prescribed burning. Prescribed burning is a treatment method used extensively by the USDA Forest Service for forest restoration (USFS 2002), illustrated by projects described in section 2.2. Prescribed burning provides benefits to all species dependent on shrub steppe habitat by reducing the amount of available fuels and, therefore, the severity of summer wildfires. Prescribed burning also rejuvenates plant communities that have evolved with fire, thereby improving habitat conditions for all species dependent on shrub steppe and grassland habitats. Recent USDA Forest Service research has focused on the benefits to, and responses of, avian species from prescribed burns (Lyons et al. 2007; Gaines et al. 2007). Additionally, prescribed burning provides acceleration of a sustainable dry late-successional ponderosa pine forest and the species dependent on this type of forest such as pileated woodpeckers, marten, white-headed woodpeckers, pygmy nuthatch, Western gray squirrel and spotted owls.

Table 1. Summary of Upland Tasks Approvedupland tasks (LC09b1) approved in the Initial WHP and Current Status of Each Task.

Task	Initiated?	Status	Carryover
Task 1: Plant/Seed Propagation	Yes	Ongoing	Yes
Task 2: 4th of July Mtn. Winter Cover Planting	No[1]	USFS Task	No
Task 3: Coyote Creek	Yes	Completed	No
Task 4: Lucerne	No[1]	USFS initiated	Yes
Task 5: Safety Harbor burn	No	Scheduled	Yes
Task 6: N 25 Restore	No	Scheduled	Yes
Task 7: Bear Mountain	Yes	Ongoing	Yes
Task 8: 25-Mile Creek	No	Postponed	Yes
Task 9: Antilon Lake	No	Scheduled	Yes
Task 10: Echo Ridge	No	Scheduled	Yes
Task 11: White Bark Pine	Yes	Scheduled	Yes
Task 12: Crupina control	Yes	Ongoing	Yes
Task 13: N. shore weed control	No	Ongoing	Yes
Task 14: Weed control for completed tasks	No	Scheduled	yes
Task 15: Lucerne LSR – control burn	No	Postponed	Yes
Task 16: Pot Peak	No	Wildfire-completed	Yes

[1]Project completed/initiated with without financial support from Chelan PUD.

Task 1: Native Plant/Seed Propagation and Increase Program.
Funds were used to collect, process, and manage native seed. This included a contract to locate, map, and collect native grass seed (bluebunch wheatgrass and Sandberg's bluegrass). The grass seed was planted to propagate the species and increase seed amounts for future rehabilitation efforts. This project is expected to be carried over into the 2013-2018 WHP.

Task 2: 4th of July Mountain Winter Range Thermal Cover Planting
The USDA Forest Service completed the task using a different source of funding. Funds originally budgeted for this task was allocated to other USDA Forest Service projects within the WHP.

Task 3: Coyote Creek Prescribed Burning (Roadless winter range)
Due to unfavorable burning conditions, the project was delayed for a number of seasons. However, a prescribed burn was completed by helicopter on March 8, 2012 (Figure 2). Approximately 644 acres were treated by the prescribed burn. This project has been successfully completed. Remaining funds under this task will be allocated to other projects within the WHP.

Task 4: Lucerne Late-Successional Reserve Restoration
Treatments were completed in 2008 and 2009 and included the planning, preparation and application of anti-aggregant bark beetle pheromones to protect large trees from post-fire beetle attacks. Additional work under this task will be proposed in the 2013-2017 WHP.

Task 5: Prescribed burning on the North shore between Safety Harbor and Antilon Creek
No treatments have occurred under this task to date. This task will be proposed in the 2013-2017 WHP.

Task 6: North 25 (Shady Pass Late-Successional Reserve) Restoration
No treatments have occurred under this task to date. This task will be proposed in the 2013-2017 WHP.

Task 7: Bear Mountain Thinning – Key Winter Range
In 2011, funds were used to develop, administer, layout, and inspect the contract for pre-commercial thinning. Contracted work for thinning, pruning, and piling in key ungulate winter range has been completed on 71 acres in 2011 and 76 acres in 2012 (Figure 3). Additional work is anticipated for this task and will carry over to the 2013-2017 WHP.

Task 8: 25-Mile Creek Key Winter Range Prescribed burning
No treatments have occurred under this task to date. This task will be proposed in the 2013-2017 WHP.

Task 9: Antilon Lake
No treatments have occurred under this task to date. This task will be proposed in the 2013-2017 WHP.

Task 10: Echo Ridge Forest Recovery
No treatments have occurred under this task to date. This task will be proposed in the 2013-2017 WHP.

Task 11: Whitebark Pine Habitat Protection and Enhancement
Chelan PUD funds were combined with USDA Forest Service funds to treat 120 acres in June, 2012 (Figure 2). The USDA Forest Service paid for planning, transportation, materials, and monitoring, while Chelan PUD funds were used for labor related to reconnaissance and layout of units and for helicopter application of Verbenone to the two treatment units in the Summer Blossom vicinity. This task will be proposed for other areas in the Lake Chelan Basin for the 2013-2017 WHP.

Task 12: Common *Crupina* Control on wilderness winter range
Chelan PUD funds were combined with USDA Forest Service funds to manage common Crupina *(Curpina vulgaris)*, a Class A noxious weed in Washington State, on approximately 400 acres of USDA Forest Service land (Figure 4). Chelan PUD provided funds for a project manager, USDA Forest Service boat support (including fuel) to reach remote sites, agency labor to remove temporary water tanks (used to support herbicide treatments), materials and supplies. Work related to this task will be carried over in the 2013-2017 WHP.

Task 13: North Shore Winter Range Weed Control Program
No treatments have occurred under this task to date. This task will be proposed in the 2013-2017 WHP. Completion of a USDA Forest Service Environmental Impact Statement (EIS) on the Chelan Ranger District may be completed in the future, so this task will carry over to the 2013-2017 WHP.

Task 14: Weed control for activities
No treatments have occurred under this task to date. This task will be proposed in the 2013-2017 WHP.

Task 15: Lucerne LSR Controlled Burn
No treatments have occurred under this task to date. This task will be proposed in the 2013-2017 WHP.

Task 16: Pot Peak
No treatments have occurred under this task to date. This task will be proposed in the 2013-2017 WHP.

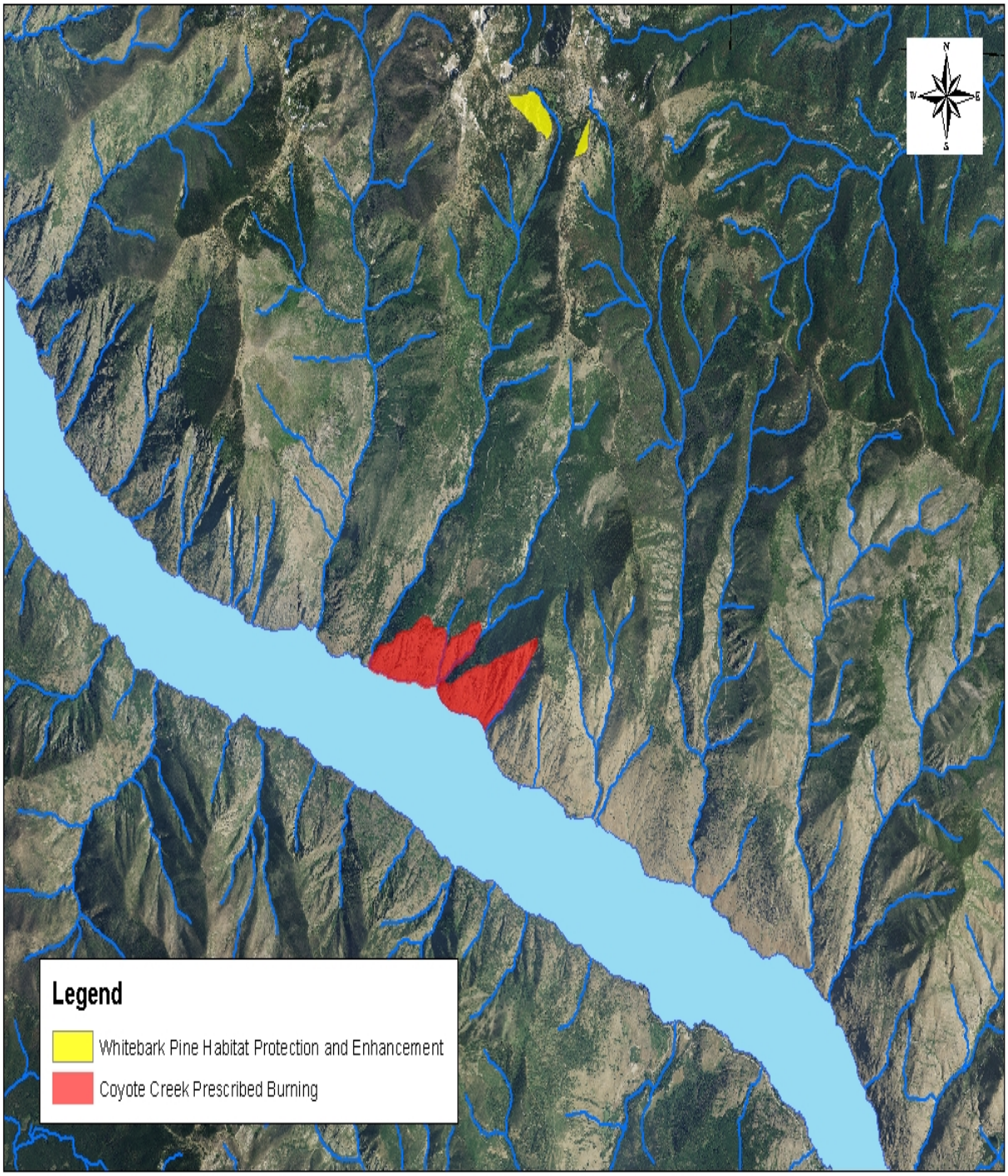

Figure 2. North Shore Lake Chelan Habitat Improvement Projects, 2008-2012.

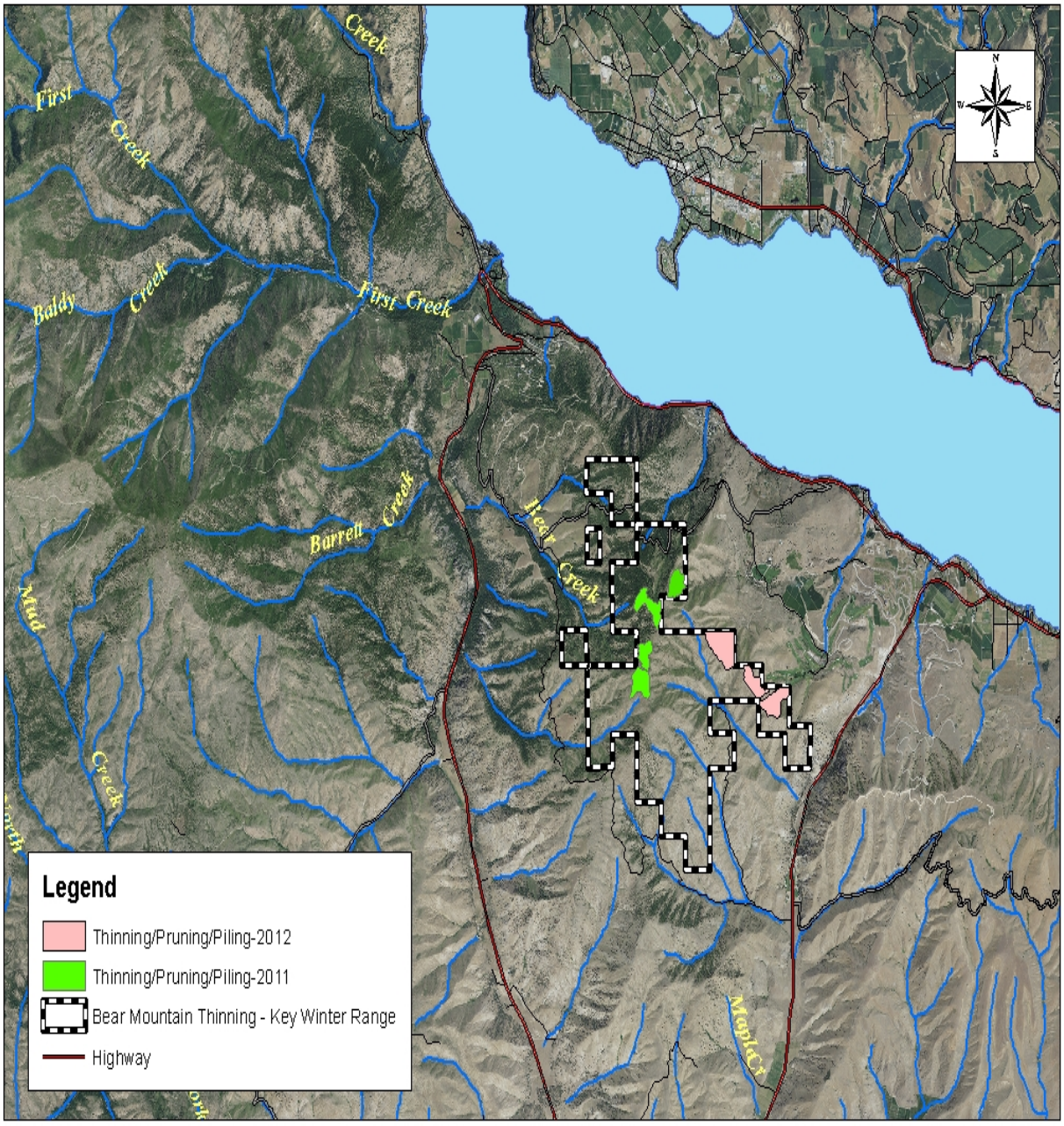

Figure 3. South Shore Lake Chelan Habitat Improvement Projects, 2008-2012.

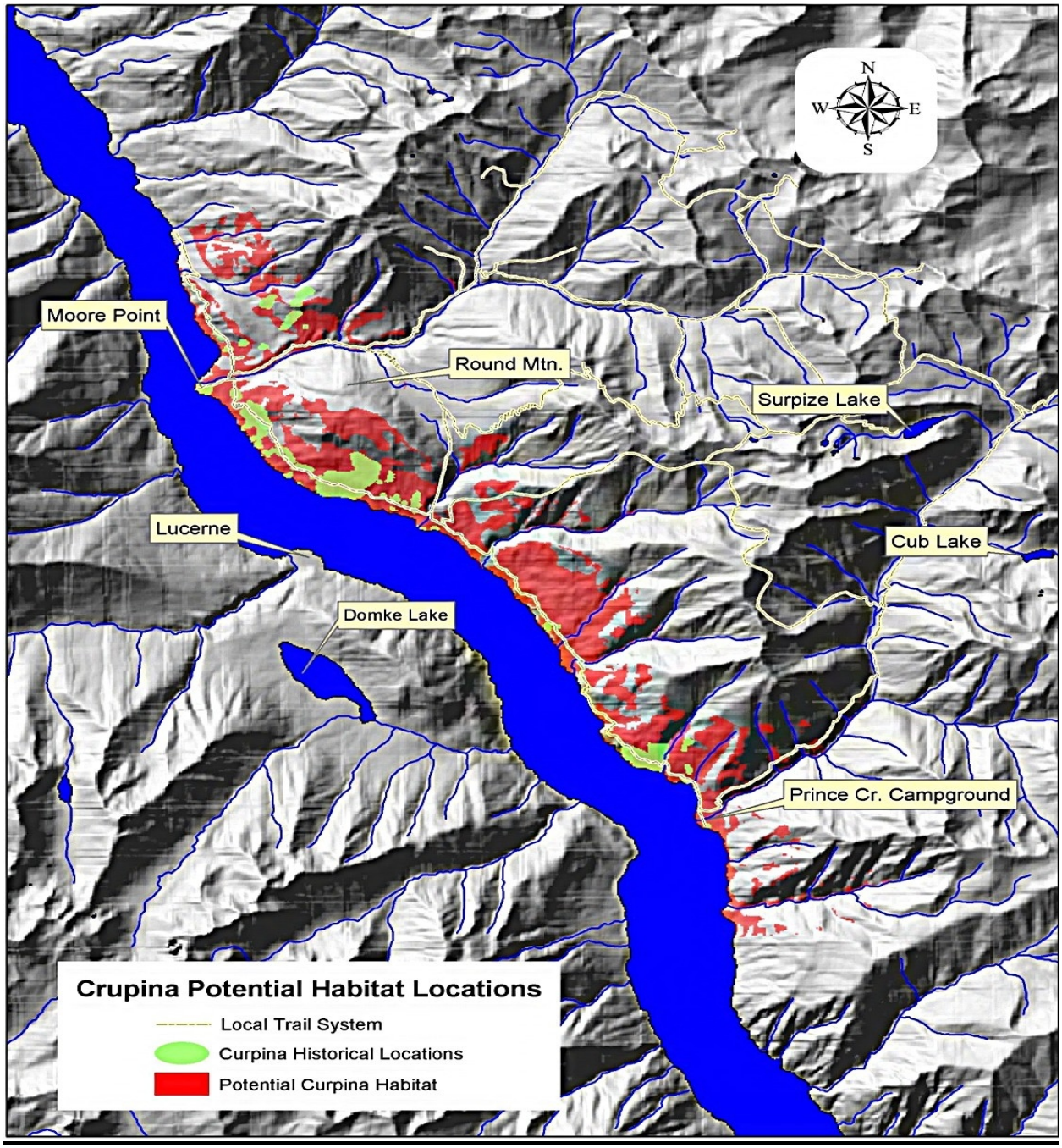

Figure 4. USDA Forest Service Crupina Control Areas along Lake Chelan, 2008-2012.

2.2.2 USDA Forest Service Noxious Weed Control Funded under LC09b2

Settlement Agreement Article 9(b) of Appendix A of the Project License describes Chelan PUD's requirement for making funds available to the USDA Forest Service for noxious weed control:

> (2) Chelan PUD shall make available to the USDA Forest Service $5,000 per year for years one through three of the New License for noxious weed control at Threatened, Endangered, and Sensitive (TES) plant locations.

Task 1 funded USDA Forest Service labor for crew oversight during C*rupina* hand-pulling and herbicide treatments. Task 1 also funded materials and supplies for the C*rupina* removal efforts, including boat transport for materials and crews. This project has been completed and no funds remain in the account for LC09b2.

2.3 Washington Department of Fish and Wildlife

Settlement Agreement Article 9(b) of Appendix A of the Project License describes Chelan PUD's requirement to conduct wildlife surveys:

> (3) Chelan PUD, in coordination with WDFW, shall continue to conduct wildlife surveys similar to those conducted during the second FERC license for the Project, maintain upland bird feeders, and/or conduct habitat improvement projects for a cost not to exceed $10,000 per year during the term of the New License, and any subsequent annual licenses.

2.3.1 Winter Wildlife Surveys

Chelan PUD has conducted winter big game surveys along Lake Chelan annually since the winter of 1982-1983 (Fielder and McKay 1984). The results were reported annually in a Lake Chelan Big Game Status Report provided to WDFW, the USFWS, USDA Forest Service, and the NPS.

In 2008, as recommended by the LCWF, Chelan PUD began to include observations of waterfowl (ducks, geese) and other waterbirds (loons, swans, grebes, etc.), raptors (eagles, hawks, accipiters, etc.) and other all easily identifiable wildlife such as furbearers during winter surveys conducted along the Lake Chelan. These observations were first included in the annual report beginning in the winter of 2007-2008 following issuance of the new License. The intent of the LCWF was to change the emphasis of the surveys from a winter big game survey to a more comprehensive winter wildlife survey along Lake Chelan. Thus, the name of the annual report was changed to the Lake Chelan Annual Winter Wildlife Survey Report. As provided in Article 406(a), Chelan PUD coordinates the winter wildlife surveys with WDFW. Annual reports are sent to the FERC, WDFW, USFS, USFWS, and NPS by April 30 of each year as required.

The Winter Wildlife Surveys on Lake Chelan are conducted from an open boat with two or more observers using binoculars and spotting scopes. The survey alternates the beginning and end

point for each survey from First Creek and Willow Point (Figure 1). The survey progresses uplake from the starting point along one shoreline with a stop at Stehekin to count waterbirds and waterfowl, then progresses down the opposite bank to the end point. All easily identifiable wildlife is recorded by species and to the nearest tenth of a mile along the lake.

Each year the winter surveys are conducted between mid November and the end of March. Each winter season (November – March) is divided into four periods (early, mid, late, and green-up) with three surveys scheduled in each. The early and mid-winter period surveys occur between Thanksgiving and the first week of January, while the late and green-up period occurs between the first of February and the end of March.

From the 2007-2008 winter through the 2011-2012 winter, Chelan PUD conducted 58 winter wildlife surveys of the 60 scheduled surveys. On two occasions, both in the winter of 2009-2010, poor weather prevented surveys from being conducted during the winter period in which they were scheduled. Since three surveys are scheduled for each of the four winter periods, data are still present for all winter periods for all five years.

Where possible, wildlife species observed are classified by age and/or sex. Due to the long observation distances, mountain goats are not classified by sex, only age. Mule deer bucks are only classified in the early and mid-winter periods prior to shedding their antlers.

Results from the first five years of winter survey (2007-2008 to 2011-2012) data are briefly summarized below and shown in Table 2. For more detailed winter survey data, please refer to the individual annual Lake Chelan Winter Wildlife Survey Reports from 2007-2008 through 2011-2012.

Mountain Goats

A total of 4,223 mountain goat observations were made during the 58 Winter Wildlife Surveys conducted from 2008-2012. The average number of mountain goats observed for each winter ranged from 69.3 to 95.8 mountain goats. The highest number of mountain goats observed in one single survey was 141 (Table 2), which is the most ever observed in a single survey since surveys began in 1982. In recent years, kid ratios (kids/100 adults) have been higher along the south compared to that of the north shore. In the early 1980s, kid ratios were slightly higher along the north shore of the lake for an extended period. The average kid ratio of 34.0 kid/100 adults observed during the initial WHP is much higher than the average of 26.2 kids/100 adults from the period of 1982-2007. The recent series of consecutive mild winters has likely influenced higher kid production and survival along Lake Chelan. Recent fires may have improved habitat for mountain goat winter range. Fires may also have opened up more travel corridors to wintering habitat for goats along the South Shore.

Mule Deer

A total of 9,801 observations of mule deer were made over 58 winter wildlife surveys from 2008-2012. Over 99% of the deer observed are mule deer, but some black-tailed deer have been observed along the north shore. Seventy percent of all observation occurred on the north shore with 40.5% of the observations within a five-mile stretch between Gold Creek and Deer Point where conservation easements are being sought (under section 2.1). Along the south shore, 67%

of all observations were located within a 10-mile stretch along the highly developed shoreline area between First Creek and Twenty-five Mile Creek (Figure 1) with the remaining 33% occurring along a 30-mile stretch of rugged north-facing shoreline.

Over 60% of all deer observed along Lake Chelan were classified by age and/or sex for all surveys from 2008-2012. Along the north shore 3,151 adults, 846 fawns, and 235 bucks were observed. Along the south shore 1,232 adults, 348 fawns, and 107 bucks were observed. Bucks are only classified in the early and mid-winter period after which deer are only classified by age (adult or fawn).

Since the winter of 1996-1997, relatively fewer deer were observed along Lake Chelan during annual winter surveys. The winter of 1996-1997 was particularly harsh and an estimated 70% of the deer population in Chelan County was lost (WDFW 2003). While a recovery appears to be apparent based on recent winter survey data, the extent of the recovery is unknown since recent winters have been considered mild. In mild winters, deer may not descend to the lower elevations of winter range where they are easily visible from the lake.

Bighorn Sheep

Bighorn sheep were re-introduced onto the north shore of Lake Chelan in 1999 and have increased in numbers since then. A total of 1,646 observations of bighorn sheep were observed over the past five winters with over 73% classified by age and sex. The average number of sheep observed per survey during the past five winters is 29. Rams were further classified (where possible) according to Geist (1971) into four different age classes (class 1-4).

Although only a portion of the estimated 120 animals in the bighorn sheep herd are observed during winter surveys, monitoring provides regular updates of herd composition and distribution. Bighorn sheep observed are counted and classified by age (adult or lamb) and sex (ram or ewe) when conditions allow during each survey period.

Bald and Golden Eagles

Eagle numbers observed during winter surveys along Lake Chelan have been recorded since 1982. Eagle species are observed sporadically along either shore of the lake and are often found in large numbers associated with carrion along or near the shoreline. The average number of bald eagles observed during the past five winters was 5.4 bald eagles/survey, which is higher than the historical average (4.1 bald eagles/survey). The maximum number of bald eagles observed during any one survey was 15, which was recorded during two different times including the mid-winter period of 2008-2009 and the early winter period of 2009-2010.

Golden eagles are also frequently observed along the lake though not in great numbers. The average number of golden eagles observed during the past five winters was 3.1 golden eagles/survey and is higher than the historical average of (2.5 golden eagles/survey). The maximum number of golden eagles observed on any one survey was 14 during the mid-winter period of 2008-2009, and the next highest was 8 during the late winter period in the same year.

Waterbirds and Waterfowl

Lake Chelan is a large body of water that supports a variety of waterbirds and waterfowl during the winter season. For the Lake Chelan Winter Wildlife Survey reports, waterfowl are comprised of the traditional duck and goose specie while waterbirds include a diverse group of birds including loons, grebes, swans, and gulls. For the five-year winter summary, over 70% of the waterbirds and waterfowl observed were located at the confluence of the Stehekin River with Lake Chelan near Stehekin. Another 25% were observed at the lower end of the survey area between Twenty-five Mile Creek and First Creek (Figure 1). The remaining 5% were observed along the remaining 30 miles between the upper and lower survey area.

Waterfowl are the most abundant group of birds observed with 28,709 waterfowl observations recorded during the five-year winter monitoring period. On average, 495 waterfowl were observed during each survey. The maximum number of waterfowl observed was 905 during a mid-winter period count in 201, the minimum was 225 during the green-up period of 2010 (Table 2). The most common waterbird observed was the horned grebe, with an average of 52 horned grebes/survey and a maximum of 167 in a single survey.

Other Wildlife

Carrion resulting from winter mortality and predation influences the number of predators and scavengers seen along the lake during winter wildlife surveys. Most big game winter mortality generally occurs late in the winter when animals have exhausted their body fat and energy stores.

Coyotes are regularly observed throughout the winter season. Bears have been observed during the spring green-up period during surveys. Bobcats and cougars are seen infrequently during winter surveys. During one survey, two elk were observed along the north shore in the Rattlesnake Creek vicinity. Elk observations are rare along the lake, and have only occurred on four other surveys, with all four of those occurrences during the winter of 1987-1988 along the south shore.

Table 2. Summary of Annual Winter Wildlife Surveys along Lake Chelan from 2008-2012 Including Maximum Counts by Winter Period.

Winter	Period	Number of Surveys	Mountain Goat	Mule Deer[1]	Bighorn Sheep	Bald Eagle	Waterbirds	Waterfowl
2007-08	Early	3	77	55	39	3	98	410
	Mid	3	67	289	51	10	99	755
	Late	3	70	508	46	10	94	898
	Green-up	3	130	287	24	6	73	648
2008-09	Early	3	99	33	49	8	136	468
	Mid	3	48	177	50	15	117	659
	Late	3	114	236	41	10	136	624
	Green-up	3	77	475	55	5	107	610
2009-10	Early	2	99	38	53	15	98	478
	Mid	3	141	105	53	7	96	621
	Late	3	61	295	58	11	113	350
	Green-up	2	77	192	48	7	134	225
2010-11	Early	3	124	395	54	6	90	405
	Mid	3	108	778	28	8	91	905
	Late	3	55	107	53	12	199	847
	Green-up	3	94	279	47	5	134	569
2011-12	Early	3	111	67	23	5	117	647
	Mid	3	128	20	23	6	413	798
	Late	3	55	190	44	9	70	665
	Green-up	3	54	107	14	5	60	485
Total/5 -year Maximum		**58**	**141**	**778**	**58**	**15**	**413**	**905**

[1]Includes 10 observations of black-tailed deer

2.3.2 Upland Bird Feeders

Three upland bird feeders were installed, replacing some damaged by fire, along the shoreline at Poison and Grade creeks and downstream of Deer Point in the fall of 2007. The feeders are inspected for damage and filled with wheat each fall prior to the onset of winter. The chart below shows the dates the feeders were inspected and filled.

Winter Year	Date filled
2008-09	Oct. 10
2009-10	Nov. 5
2010-11	Oct. 22
2011-12	Oct. 26
2012-13	Oct. 10

SECTION 3: RIPARIAN HABITAT IMPROVEMENTS

As specified in License Article 406 and Appendix A of the License, Chelan PUD provided funds for riparian habitat improvements. Ordering Paragraphs (D) and (E) of the Project License both provide that Settlement Article 9 (WHP) is made part of the license.

None of the riparian habitat improvement measures described in this section required annual or periodic maintenance to ensure their success; therefore, no additional lands were brought into the project boundary.

3.1 Funding for National Park Service Riparian Habitat Improvements

Many of the habitat improvements to be implemented on NPS land under Article 406(b) and Settlement Agreement Article 9(c) overlap and interrelate with measures to be implemented in the Stehekin area pursuant to Article 403 and Settlement Agreement Article 4. Consequently, to provide FERC with a single, complete picture regarding NPS-related measures, the NPS and Chelan PUD have agreed to combine the description and implementation of all such measures in the Stehekin Area Implementation Monitoring Plan.

3.2 Funding for USDA Forest Service Riparian Habitat Improvements under LC09c2A

Settlement Agreement Article 9(c) of Appendix A of the Project License describes Chelan PUD's requirement for making funds available to the USDA Forest Service for riparian habitat improvements:

> (2) Chelan PUD shall make available:
>
> (A) $50,000 to the USDA Forest Service to enhance riparian habitat in the Lake Chelan basin;

The following list includes riparian habitat enhancements initiated by the USDA Forest Service in the initial WHP.

Task 1 Low elevation riparian planting
Native tree and shrub seed was collected and shipped to the nursery for cleaning, testing, storage, and propagation. Seeds collected for riparian enhancements included cedar, dogwood, and big-leaf maple. In 2010, 500 cedar saplings were planted at seven different locations. In 2012, additional big leaf maple and dogwood seeds were collected for propagation and future planting.

Task 1, Mid-elevation riparian planting
During the initial WHP, mid-elevation plantings were initiated using a combination of USDA Forest Service and Chelan PUD dollars. During 2010, 500 cedar trees were planted in seven locations on alluvial deposits along the shores of Lake Chelan (Figure 5). In 2011, an additional 800 cedar, 500 ponderosa pine, and 100 big leaf maple were planted along three different creeks (Prince, Mitchell, and 25-Mile creeks).

Task 3, Woody debris Management at Prince Creek

No treatments have occurred under this task to date; this project is not carried over to the 2013-2017 WHP.

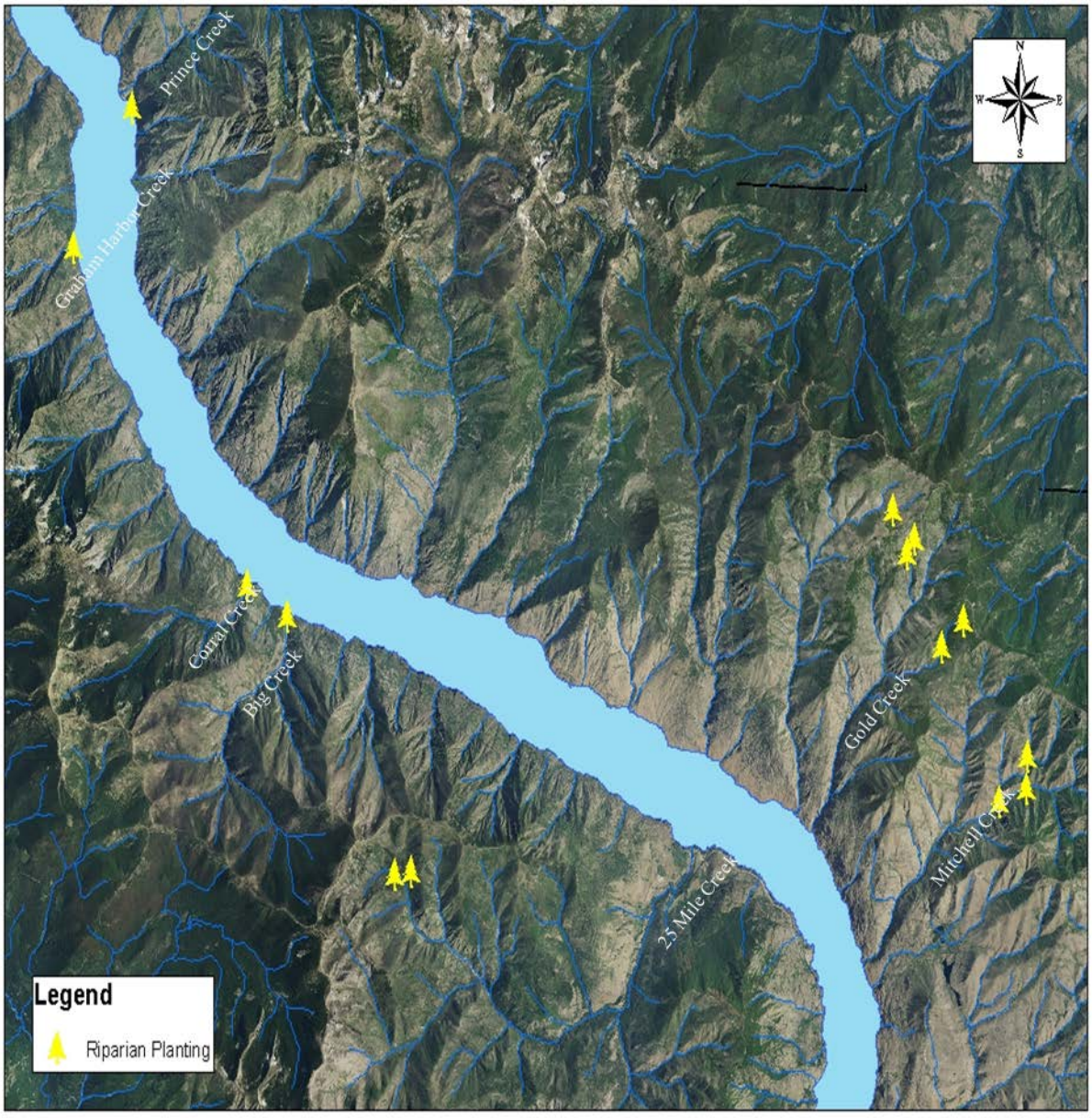

Figure 5. USDA Forest Service Riparian Planting Areas along Lake Chelan, 2008-2012.

3.3 Funding for Washington Department of Fish and Wildlife Habitat Improvements under LC09c2c

Settlement Agreement Article 9(c) of Appendix A of the Project License describes Chelan PUD's requirement for making funds available to the WDFW for habitat improvementsdescribes the:

> (2) Chelan PUD shall make available:
>
> (C) $35,000 to the WDFW to enhance habitat in the Lake Chelan basin.

WDFW and Chelan PUD have agreed to reserve this funding until conservation easements are acquired. As noted in section 2.1, the area of primary focus for acquisition of conservation easements on private lands is located on the north shore, Lower Basin Zone, between Gold Creek and Camas Creek (Figure 1) at elevations between 1,200 and 1,400 feet mean sea level (MSL) (i.e., from 100 feet about lake level to approximately 300 feet above). Once easements are acquired, funding from this source could be used to provide additional habitat restoration or enhancement activities on lands where easements are acquired, or for other habitat enhancements projects in the Chelan basin.

SECTION 4: FUNDING

Chelan PUD and Agency Payment Agreement

All payments for work conducted by the USDA Forest Service and WDFW were in accordance with Section 19 of the Settlement Agreement. Reimbursement for work completed on approved projects was made after invoices with supporting documentation were provided to Chelan PUD.

Table 3. Expenses Incurred During the Initial WHP.

AGMT ARTICLE	DESCRIPTION	5-YEAR ACTIVITIES SUMMARY	TOTAL SPENT
LC09a1	WDFW Easement Fund	Pursue Conservation Easements	-----
LC09a2	Cascadia Easement Fees	Task 1: Conservation Easement acquisition	-----
		Task 2, Item 1: Phase 1, Cascadia (COMPLETED)	$7,915.11
		Task 2, Item 4: Phase 2, Cascadia	-----
LC09a3	WDFW Habitat	Task 1: Land Restoration	-----
LC09b1	USFS Upland Habitat	Task 1: Plant/Seed Propagation.....	$5,665.75
		Task 2: 4th of July Mtn. Planting	-----
		Task 3: Coyote Creek	$11,009.78
		Task 4: Lucerne Burn Plan Prep.....	$32,860.81
		Task 5: Safety Harbor Burn.....	-----
		Task 6: North 25 Restoration	-----
		Task 7: Bear Mountain Thinning	$20,637.96
		Task 8: 25-Mile Creek Burn.....	-----
		Task 9: Antilon Lake Fence Removal	-----
		Task 10: Echo Ridge Forest Recovery	-----
		Task 11: White Bark Pine Habitat Protection.....	$30,106.65
		Task 12: Crupina Control	$23,786.84
		Task 13: North Shore Weed Control	-----
		Task 14: Weed Control Activities	-----
		Task 15: Lucerne LSR Restore……...	-----
		Task 16: Pot Peak Restoration.....	-----
LC09b2	USFS Noxious Weeds	Task 1: Weed Control (10-017) COMPLETED	$17,855.04
LC09c1	NPS Stehekin Habitat (made part of SAIMP)	Refer to the SAIMP 2011 Annual Report..... and 2012 Work Plan.	-----
LC09c2A	USFS Riparian Habitat	Task 1: Planting.....	$3,486.62
		Task 2: Plant Cedar Trees at Mid-Elevation.....	$1,627.68
		Task 3: LWD Highgrade & Move at Prince Creek	-----
LC09c2B	NPS Riparian Habitat (made part of SAIMP)	Refer to the SAIMP 2011 Annual Report..... and 2012 Work Plan.	-----
LC09c2C	WDFW Riparian Habitat	No activity	-----
		TOTALS	$154,952.24

SECTION 5: LITERATURE CITED

Eldred, T. E. 2007. Lake Chelan Wildlife Forum meeting, July 10, 2007.

Fielder, P.C. and C.E. McKay, Jr. 1984. Lake Chelan wildlife studies with emphasis on mountain goats and mule deer. Technical report of the Public Utility District No. 1 of Chelan County and the WA. Dept. of Game, Wenatchee, WA.

Geist, V. 1971. Mountain Sheep. A Study in Behavior and Evolution. University of Chicago Press, Chicago, Ill. USA.

Gaines, W.L., M. Haggard, J. F. Lehmkuhl, A.L. Lyons, and R.J. Harrod. 2007. Short-term response of land birds to ponderosa pine restoration. In Press, Journal of Restoration Ecology.

Lyons, A.L., W.L. Gaines, J.F. Lehmkuhl, and R.J. Harrod. 2007. Short term effects of fire and fire surrogate treatments on foraging tree selection by cavity-nesting birds in dry forests of central Washington. In Review, Forest Ecology and Management.

USFS 2002. Okanogan and Wenatchee National Forests Fire Management Plan, Chapter III, Section E - Fire Regimes and Disturbance Processes, Resource Benefits (pages 16-52).

APPENDIX A: CONSULTATION WITH STAKEHOLDERS

The LCWF meets as necessary to implement measures in the approved WHP. More frequently, Chelan PUD and representatives with funding in the approved WHP meet to discuss annual work plans, schedules, and budgets relative to the WHP. The LCWF met on July 31, 2012 to discuss the need and schedule for drafting a 5-year summary report and an updated 5-year WHP. Correspondence continued after the July 31 meeting and on February 26, 2013, a draft of the 5-year summary report was provided to the LCWF for final review.

LCWF Membership List
Washington State Department of Fish and Wildlife
United States Department of Agriculture Forest Service
National Park Service
United States Fish and Wildlife Service
Confederated Tribes of the Colville Reservation (CCT)
Confederated Tribes of the Umatilla Indian Reservation (CTUIR)
Yakama Nation
Wenatchee Sportsman's Association
Lake Chelan Sportsman's Association
NCW Mule Deer Foundation
Foundation for North American Wild Sheep
Audubon Society
National Wild Turkey Federation.

30 Day Comments

A draft of this 5-year summary report was sent to the LCWF on February 26, 2013 for review. No comments were received by April 1, 2013. (See link, http://www.chelanpud.org/departments/licensingCompliance/LC_implementation/corres/40206.pdf.)

Document Content(s)